

# Public Utilities

FORTNIGHTLY



Volume 55 No. 3

February 3, 1955

## SOME PROBLEMS OF PRIVATE NUCLEAR DEVELOPMENT

By A. Bryan Marvin

< >

## Color Phones Are Just the Beginning

By James H. Collins

< >

## Good Partners in Mexican Utilities Part II.

By Herbert M. Bratter

< >

## British Telephone Depreciation Practice

PUBLIC UTILITIES REPORTERS PUBLISHERS

# Gas Guardians!

## SPRAGUE

CAST IRON AND ALUMINUM CASE

## GAS METERS and REGULATORS



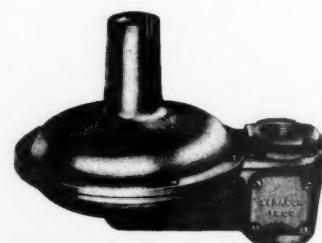
SPRAGUE NO. 1A METER

unequalled service and low maintenance cost of Sprague Meters and Regulators for over fifty years. For simplicity of design, rugged construction and quality of materials, Sprague products are unrivaled in their field.

Modern methods demand that devices of this nature must be interchangeable to keep maintenance costs low.

The foresight of Sprague Engineers in the past, today makes the oldest Sprague models as efficient as the newest.

The services of the Sprague Engineering Staff are at your disposal. Data and problems of gas measurement and control will be gladly furnished. Write for a complete set of catalogs.



SPRAGUE 1500 REGULATOR

### THE SPRAGUE METER COMPANY

BRIDGEPORT 4, CONNECTICUT

BRANCHES: DAVENPORT, IOWA • HOUSTON, TEXAS  
LOS ANGELES, CAL. • SAN FRANCISCO, CAL.

*Editor-in-Chief* • ELLSWORTH NICHOLS

*Editorial Consultant* • HENRY C. SPURR

*Editor* • FRANCIS X. WELCH

*Associate Editors* • RALPH S. CHILD

FRANKLIN J. TOBEY, JR.

FORRESTER MAPHIS

NEIL H. DUFFY

DONALD E. ROBINSON

NORMAN J. BARATT

*Assistant Editors* • M. C. McCARTHY  
M. L. WILLIAMS

*Financial Editor* • OWEN ELY

---

*Advertising Manager* • E. L. COOKE

*Circulation Manager* • E. S. STEVENS

---

**REPRINTS OF ARTICLES**

(200 or more copies)  
available on orders received within 30 days  
after publication date.

*Address*

WASHINGTON OFFICE  
for quotations.

---

PUBLIC UTILITIES FORTNIGHTLY . . stands for federal and state regulation of both privately owned and operated utilities and publicly owned and operated utilities, on a fair and nondiscriminatory basis; for non-discriminatory administration of laws; for equitable and nondiscriminatory taxation; and, in general—for the perpetuation of the free enterprise system. It is an open forum for the free expression of opinion concerning public utility regulation and allied topics. It is supported by subscription and advertising revenue; it is not the mouthpiece of any group or faction; it is not under the editorial supervision of, nor does it bear the endorsement of, any organization or association. The editors do not assume responsibility for the opinions expressed by its contributors.

---

\$1.00 a Copy

26 Issues a Year

Annual Subscription Price

United States and possessions ..... \$15.00

Pan American countries ..... \$15.00

Canada \$16; all other countries ..... \$17.50

Entered as second-class matter April 29, 1915,  
under the Act of March 3, 1879, at the Post Office  
at Baltimore, Md., December 31, 1936. Copy-  
righted, 1954, by Public Utilities Reports, Inc.  
Printed in U. S. A.

# Public Utilities

**FORTNIGHTLY**

VOLUME 55

FEBRUARY 3, 1955

NUMBER 3



---

## ARTICLES

- Some Problems of Private Nuclear Development ..... *A. Bryan Marvin* 119  
Color Phones Are Just the Beginning ..... *James H. Collins* 126  
Good Partners in Mexican Utilities. Part II. ..... *Herbert M. Bratter* 133

## FEATURE SECTIONS

- Washington and the Utilities ..... 144  
Wire and Wireless Communication ..... 147  
Financial News and Comment ..... *Owen Ely* 150  
What Others Think ..... 159  
The March of Events ..... 165  
Progress of Regulation ..... 168  
Public Utilities Reports (*Selected Preprints of Cases*) ... 174  
• Pages with the Editors . 6 • Remarkable Remarks .. 12  
• Utilities Almanack .... 117 • Frontispiece ..... 118  
• Industrial Progress ... 27 • Index to Advertisers .. 40

---

## PUBLIC UTILITIES REPORTS, INC., PUBLISHERS

*Executive, Editorial & Advertising Offices*.... MUNSEY BLDG., WASHINGTON 4, D. C.

*Publication Office* ..... CANDLER BUILDING, BALTIMORE 2, MD.

*Advertising Representatives:*

New York 6: Robert S. Farley, 111 Broadway, COrtland 7-6638

Cleveland 15: Macintyre-Simpson & Woods, 1900 Euclid Avenue, CHerry 1-1501

Chicago 1: Macintyre-Simpson & Woods, 75 E. Wacker Drive, CEntral 6-1715

Pacific Coast: M. D. Pugh, 2721 North Marengo Avenue, Altadena, Calif.,

SYcamore 7-2894

# 2 B&W Boilers Make Major Contribution to efficiency and



Utilizing design improvements developed to increase power generation efficiency and raise the level of unit availability, Pennsylvania Electric Company's new Shawville Station truly typifies power progress while demonstrating Penelec's awareness of future requirements in the area it serves. Currently operating as a two-unit plant, Shawville Station will eventually be expanded to 4 units and have a capacity totalling more than 500,000 kw.

Another addition in General Public Utilities' expansion program, Shawville Station is situated in coal fields near the center of Penelec's system load. Its two identical B&W Radiant Reheat Boilers have a design pressure of 2080 psi and a combined steam

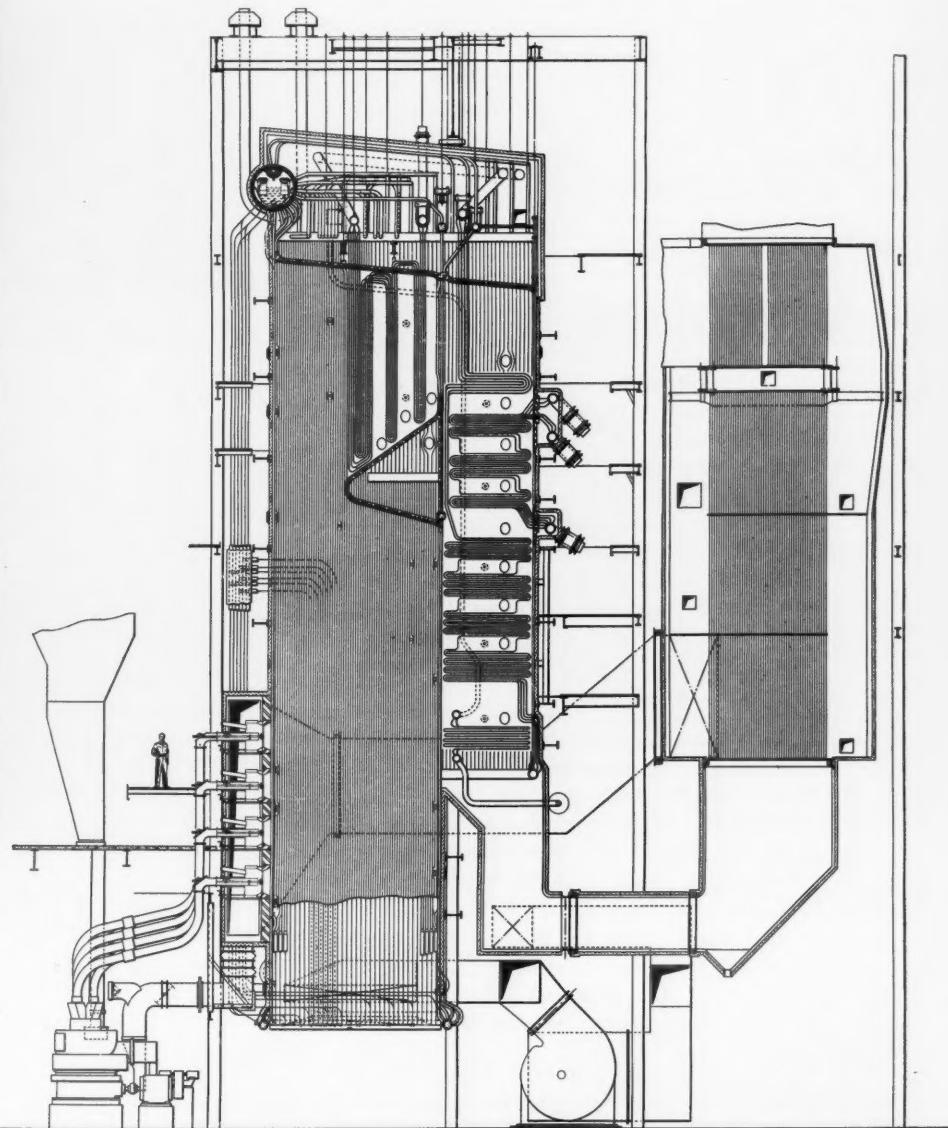
capacity of 1,788,000 lb per hr. These units include B&W Cyclone Steam Separators for natural circulation and each is equipped with 16 burners served by 4 B&W Pulverizers. This installation also includes B&W tubular airheaters and B&W continuous-tube type economizers.

Modern in every sense, Shawville Station has already demonstrated its efficiency during the first months of operation. It is one more practical tribute to the unending efforts of progressive electric companies, consulting engineers and B&W boiler experts working cooperatively to further advance the science of steam-electric power generation.

# d. high availability at SHAWVILLE STATION



Shawville Station of the Pennsylvania Electric Company. Engineering design and construction supervisory services by Gilbert Associates, Inc.



**BABCOCK  
& WILCOX**



BOILER DIVISION

One of two identical, dry-bottom B&W Radiant Boilers now supplying steam at Shawville. Steam capacity is 894,000 lb per hr per unit. Steam pressure is 1900 psi at the superheater outlet and temperature is 1055 F with reheat to 1005 F.

# *Pages with the Editors*

RECENTLY the chairman of the Atomic Energy Commission, Lewis L. Strauss, announced that the AEC had approved a power demonstration reactor program designed to open the way for American industry to develop, fabricate, construct, and operate experimental nuclear power reactors. The aim of the program is to bring private resources into the development of engineering information on the performance of nuclear power reactors and to advance the time when nuclear power will become economically competitive.

UNDER this program, the chairman stated that proposals for commission co-operation may be submitted up to April 1, 1955, by applicants who are willing to assume the risk of construction, ownership, and operation of reactors designed to demonstrate the practical value of such facilities for industrial or commercial purposes. The commission may accept one or several of the proposals—or it may find that none is acceptable. To carry on their projects, persons or firms making acceptable proposals must qualify as licensees under the provisions of the Atomic Energy Act of 1954.

THIS announcement is certainly a significant step in the direction of the expected co-operation between the AEC and private industry in developing peaceful uses for nuclear power. Despite this nation's original long lead in the development of the atomic bomb and the hydrogen bomb for military purposes, there is a chance that other nations, even in the western orbit, may overtake and surpass us in peaceful application of nuclear knowledge.

OF course, these other nations have pressing reasons for seeking nuclear power in industries as early as possible. In Great Britain, for example, underground coal reserves are not endless, while those in this country are sufficient for centuries of use at the prevailing rate of consumption. Moreover, Britain must import most of



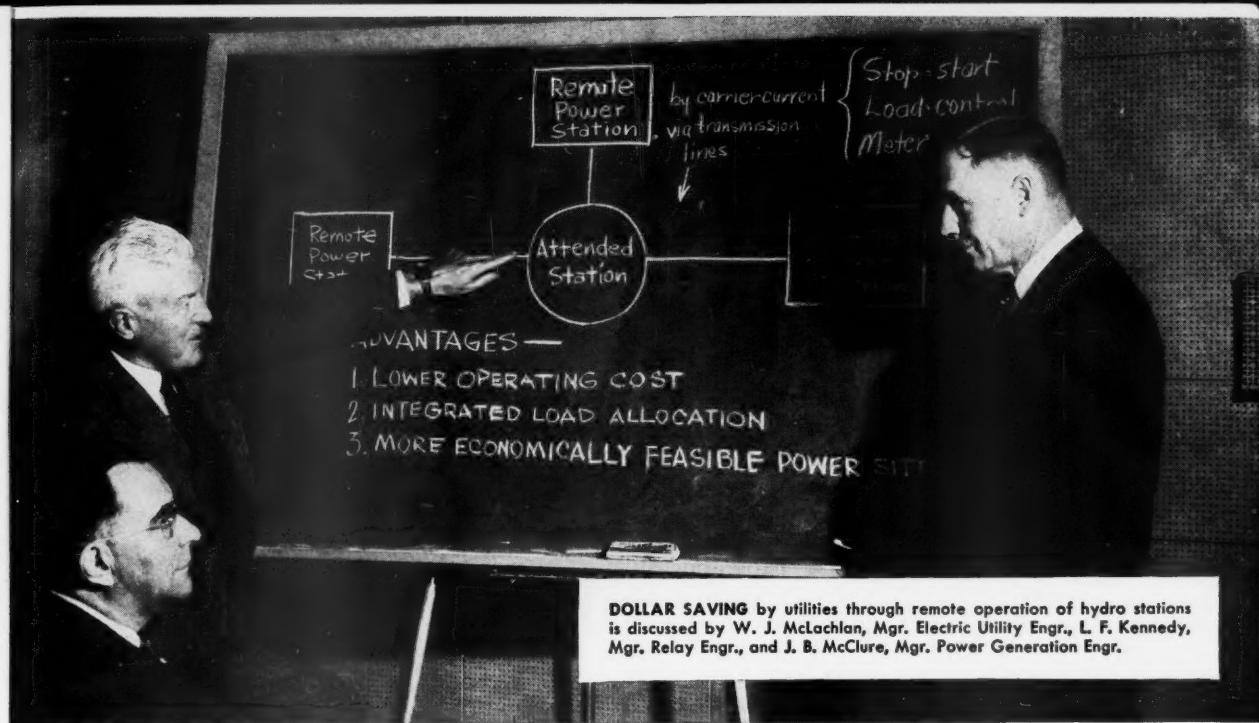
A. BRYAN MARVIN

her oil and has no natural gas. Electric power is more expensive in Great Britain than in the United States. Hence the drive to harness nuclear energy at the boiler room level is a more urgent matter in Great Britain and perhaps elsewhere in Europe than in the United States.

PERHAPS no one on this side of the iron curtain really knows how far Russia has gone towards industrial use of the atom. But Russia also has a powerful incentive because of her far-flung dominions and her drive to industrialize remote regions. So it is interesting to note the AEC announcement about advancing the time "when nuclear power will become economically competitive."

THAT is an overriding point of interest not only to the electric utility industry in the United States, but to our natural gas and coal industries as well. If the industrial future of the universe is eventually to be decided on the basis of nuclear power, our nation must get on with the job of competing, first of all with the Soviet Union in the difficult and probably drawn-out struggle between the slave world and the free. We must also compete eventually with the free world itself.

As of today, of course, atomic power



**Increasing fuel, labor costs . . .**

## Spur trend to automatic hydrostations

Rising costs of labor and fuel, dependability of control equipment, and high operating flexibility are giving new impetus to the trend to automatic hydroelectric power plants.

### NEW SITES, CONVERSION ON UPSWING

The move is evident in the growing number of new plants now being equipped with automatic control. And the trend shows clearly in the conversion of existing manually operated plants on the one hand and in the development of marginal hydro-sites for automatic operation on the other. Many marginal sites which manual control costs would render

uneconomic become feasible through automatic control.

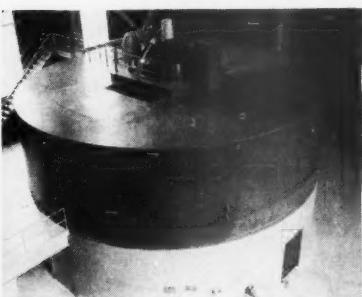
### OPERATING ECONOMIES MARKED

At Stewarts Bridge, N. Y., for example, General Electric engineers helped meet equipment specifications for the world's largest single-unit, fully automatic station. Here, Niagara Mohawk Power Corp. is finding that after higher installed costs, the expense of maintaining the 37,500 kva station is practically nil. Capitalizing on Type 20 Carrier Current control, which permits signal transmission right on the power line, the station can be brought on the line, controlled, metered

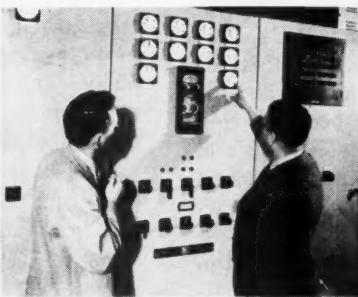
and shut off from a central point six miles away.

When reviewing system operating costs, utilities can profit from consideration of automatic, remotely controlled hydro-electric stations. High accuracy equipment now available makes them more attractive than ever. For full data on how automatic hydro-electric plants can help reduce over-all system operating costs, write to General Electric Company, Section 301-276, Schenectady 5, New York.

**MORE POWER TO AMERICA**  
**GENERAL ELECTRIC**



**WORLD'S LARGEST** single-unit, fully automatic hydro-electric station of Niagara Mohawk Power Corp. at Stewarts Bridge, N. Y. is General Electric equipped, rated 37,500 kva.



**TYPE 20 CRYSTAL CARRIER CURRENT** used for first time at Stewarts Bridge controls by signal over power transmission line. Three functions can be sent, received independently.



**HIGH OPERATING FLEXIBILITY** reaches peak since hydro-electric plant can be brought on the line automatically in a matter of minutes to meet daily load changes.

## PAGES WITH THE EDITORS (*Continued*)

for electric use is still in the transitional stage between experiment and industrial establishment. For some time in the future, it will definitely not be cheap power. Even the AEC and other experts cannot pinpoint the time when electric rates can be cut to the consumer as a result of the introduction of atomic power—for the obvious reason that even on a competitive basis atomic power is simply a substitution of fuel at the boiler room level. It will probably not be until future load requirements begin to get support from the virtually unlimited fuel resources of nuclear energy that atomic power will begin to be a real economic factor. But as far ahead as we can see now, the harnessing of nuclear reactors to ordinary transmission and other electric utility system lines will be pretty expensive business.

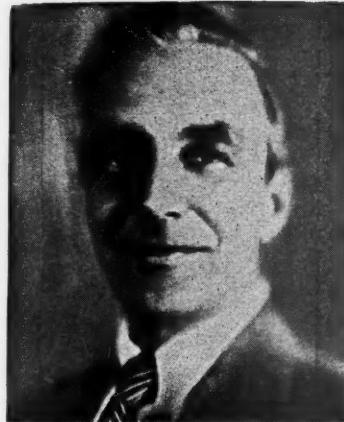
IN the opening article in this issue, A. BRYAN MARVIN of the press relations and public information department of the Consolidated Edison Company of New York, Inc., discusses some of the problems which will confront the electric utility, aside from purely engineering problems, in translating the great boon of atomic fission into conventional and routine public service. The author assures us, however, that atomic power is on its way and when it gets here the world will be assured of virtually inexhaustible supplies of fuel for power.

PRIOR to joining Consolidated Edison he was a newspaper reporter with the *Stamford (Connecticut) Advocate*. He was educated at St. Marks and Yale University.

\* \* \* \*

STARTING even before the New Year of 1955, Bell system engaged in its first big nation-wide merchandising campaign for a long time. The campaign is a reflection of the fact that the system has almost caught up with the huge demand for telephone service that has been growing since the end of the war. The first and most important phase of this campaign dealt with nation-wide advertising featuring color telephones to "blend with the decor of home or office" and appeared in the press and periodicals.

IN his article beginning on page 126,



JAMES H. COLLINS

JAMES H. COLLINS, Los Angeles business writer, tells us the story behind the story of this transition from purely demand selling of service to aggressive stimulation of demand. The new rôle of telephone companies in ringing doorbells and going after business in the old-fashioned manner of sales promotion is something the American public can understand.

\* \* \* \*

IN his first instalment (published in our issue of January 20, 1955) HERBERT M. BRATTER, well-known financial writer, described the economic and regulatory setup in Mexico for public utilities financed with foreign capital. In this second part the writer discusses Monterrey Railway, Light & Power Company. Also in the concluding instalment, which will be found on page 133, the author goes into the problems of "Impulsora" (owned by American & Foreign Power Company), operating 17 Mexican companies serving 315 communities. He also discusses the rate-fixing problems of the Monterrey Company and other foreign-financed utility operations, including tramways, waterworks, and telephones, and gives us some conclusions and comment by responsible officials, of both the United States and Mexico.

THE next number of this magazine will be out February 17th.

*The Editors*



**NOW...  
Cashiering and  
Bookkeeping  
in one unit...  
a great  
space-saving,  
public relations  
tool!**

This Customer Service Counter is a complete working station for all cashiering and bookkeeping operations. It provides the highest degree of efficiency, in the smallest amount of space.

The customer has ideal counter height for making out checks and applications. There's even a continuous parcel shelf, encouraging customers to step aside so that the next in line may be served.

The clerk *always* faces the customer...wastes no time walking from bookkeeping desk to counter and back. Customers are served more promptly, efficiently and courteously. The "extra" desk is eliminated.

With complete facilities within arm's reach, the clerk works seated comfortably at her desk, ending the usual "standing" counter cashiering, with the fatigue and errors which are bound to result.

In larger offices, two or more units may be joined, providing any desired number of work stations. Singly, or in combination, these sections have the rich appearance of custom-made counters, but provide the adaptability that custom-made counters cannot hope to match. Each unit can house record forms of any size. Most important, desk-height, certified fire-insulated units are available to protect counter-stored vital records, 24 hours a day, at their point-of-use.



See for yourself the many advantages of the Sectional Customer Service Counter. Send for our free booklet on the subject, SC764. You'll find it interesting and informative. Just write to Remington Rand, Room 1257, 315 Fourth Avenue, New York 10, N. Y., and ask for SC764.

**Remington Rand**

PROFIT-BUILDING IDEAS FOR BUSINESS  
ROOM 2060, 315 FOURTH AVENUE, NEW YORK 10, N. Y.

# Coming IN THE NEXT ISSUE



## **MANAGEMENT LOOKS AT DEALER COMPENSATION**

Recently there appeared in PUBLIC UTILITIES FORTNIGHTLY an article advocating that utilities might find it advantageous to compensate security dealers for handling the rights of stockholders to share in distribution of new issues. This is a somewhat controversial subject. Jackson Martindell, president of the American Institute of Management, now gives us a discussion of the same situation from the standpoint of management. In this author's view, management has no right to reward some stockholders at the expense of other stockholders. He further concludes that while dealers might recommend payment for handling rights transactions, evidence does not bear out the argument that it is right or profitable for corporations to incur the added expense.

## **WHAT IS THE PURPOSE OF APPEARANCES AT RATE HEARINGS?**

It is generally agreed that regulation would be better accepted by the public if it was better understood, and it would be better understood if more people took an interest in it. The author of this article, John J. Hassett, a professional writer of business topics, has been checking up on attendance at public hearings of regulatory commissions in contested rate cases. What is the function of such public hearings? Should potential protestants be encouraged to attend before the rate cases are decided rather than make known their dissatisfaction and, perhaps, their disposition to litigate after the rate orders are handed down?

## **SETTING UP UTILITY SERVICES IN GREENLAND**

In these days of jet planes and broken sound barriers, the old saying "East is East and West is West" is becoming subject to serious qualifications as to timing. But even more startling is the trend of round-the-year establishments and permanent settlements further and further towards the North Pole. Recently our government announced plans for such establishments in Greenland for defense purposes. This means carrying utility services to a land which had scarcely a vestige of them before. Dr. Svend Frederiksen, noted Eskimologist and research associate of the Arctic Institute, gives us an interesting account of problems which may be encountered in setting up pioneering utility services in primitive and desolate countries of the North.



**Also . . . Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.**

# You may find a fresh approach . . .

Tackling utility company problems daily . . . maintaining close and continued contact with the financial world gives us an understanding of the complex field of utility financing and investor relations which may be of help to you.

A fresh approach to the problem you are now studying may be suggested by a talk with us. Call Public Utilities Department at Digby 4-3500 or write us at One Wall Street.

## **IRVING TRUST COMPANY**

ONE WALL STREET • NEW YORK 15, N. Y.

*Capital Funds over \$123,000,000*

*Total Resources over \$1,400,000,000*

*WILLIAM N. ENSTROM, Chairman of the Board*

*RICHARD H. WEST, President*

*Public Utilities Department—JOHN F. CHILDS, Vice President in Charge*

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

# Remarkable Remarks

"There never was in the world two opinions alike."

—MONTAIGNE

LIONEL D. EDIE  
*New York economist.*

"We are halfway through the greatest growth period in American history."

HOLGAR J. JOHNSON  
*President, Institute of Life Insurance.*

"The growing importance of the individual can be seen in his rôle today as employee, as a political entity, and as a citizen and social being."

WILLIAM RANDOLPH HEARST  
*Late publisher.*

"Let us maintain the Republic consecrated to freedom, and repel or repress all those who would destroy that freedom either from without or within."

M. S. RUKEYSER  
*Columnist.*

"Once the automatic and continuous correction of maladjustments on a rolling basis is stopped by excessive optimism and by a belief that prosperity and boom have been irrevocably frozen into our system, it will be a signal for trouble."

LESLIE R. GROVES  
*Lieutenant General, U. S. Army (Ret.).*

"It is my own conviction that in our kind of economy there can never be any real conflict between the oil industry and the field of nuclear energy as sources of power. As long as we can foresee into the future, there will never be too much power, and industry will be able to use every source available."

B. S. GILMER  
*Vice president, Pacific Telephone & Telegraph Company.*

"It seems to me that if there is one set of management people who are uniquely possessed of the ability to take an objective look at themselves, their own company and its management, it is, or at least it ought to be, the sales executive. Keeping himself equipped with his customer's outside point of view is one of his job requirements. Who else then has a better searchlight to shine into the darker corners of his company? The sales executive can turn the eyes of an outsider on his business. And this is a wholesome thing to do."

FRANCIS K. McCUNE  
*General manager, atomic products division, General Electric Company.*

"In the not too distant future, although possibly twenty years or more away, I believe that we will see gas, oil, and coal start to assume what I think will be their ultimate rôle: the raw materials of a greatly expanded chemical industry. Meanwhile, we will continue to use our chemical fuels in ever-increasing quantities. This I say with only one reservation—we must keep our country strong and safe. We must continue to respect and encourage free enterprise. If we do these things—and who does not believe we will?—the producers of energy—coal, oil, gas, and nuclear—will carry us together to an age of productivity as yet undreamed of."

# 6 ways to save money in communications

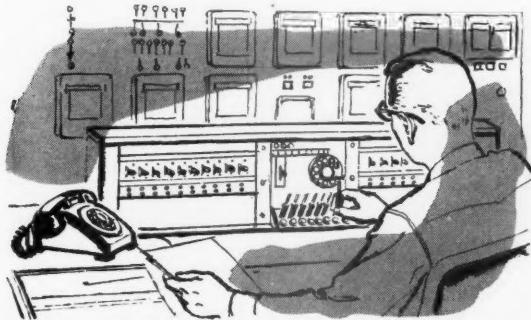
If you want to save money and, at the same time, increase efficiency, let the Bell System furnish your communications. To get the facts, Bell System

engineers will gladly make a joint review with your people. Ask your Bell telephone representative for more information.

## BELL SYSTEM GIVES YOU COMMUNICATIONS AT LOW COST



**TAILORED COMMUNICATIONS**—Bell System engineers fit your communications to your needs. You get precisely what you require. No more, no less.



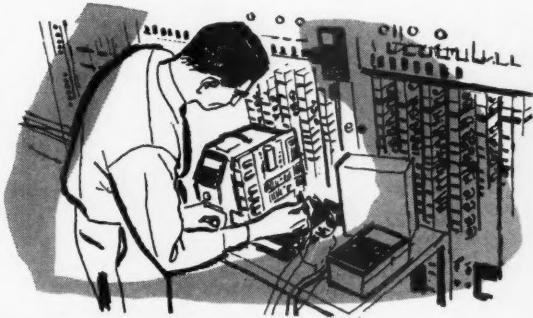
**FLEXIBLE COMMUNICATIONS**—Designed to meet your exact requirements, Bell System communications may be expanded or rearranged to match the changing needs of your business.



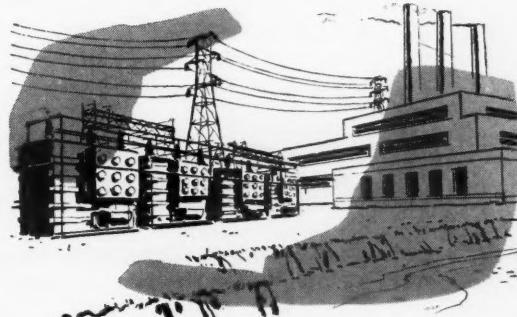
**NEWEST EQUIPMENT**—The latest developments in communications equipment are available to keep your service at peak efficiency without investment of your capital.



**ROUNDED EXPERIENCE**—You benefit from years of Bell System experience with specialists in all phases of communications.



**RELIABLE MAINTENANCE**—You are relieved of repair and replacement worries. And Bell System preventive maintenance insures that your communications stay reliable.



**YOUR MONEY** is available to invest in revenue-producing projects, not tied up in communications equipment. A fixed monthly charge covers your exact needs.

BELL TELEPHONE SYSTEM



TELEPHONE   MOBILE RADIO   TELETYPEWRITER   INTERCOMMUNICATION AND PAGING SYSTEMS   TELEMETRIZING AND REMOTE CONTROL

## REMARKABLE REMARKS—(Continued)

HENRY G. RITER III  
*President, National Association  
of Manufacturers.*

HOWARD BUFFETT  
*Former U. S. Representative from  
Nebraska.*

DOROTHY THOMPSON  
*Columnist.*

SINCLAIR WEEKS  
*Secretary of Commerce.*

DAVID J. McDONALD  
*President, United Steelworkers of  
America.*

WILLIAM T. FARICY  
*President, Association of  
American Railroads.*

CLEM D. JOHNSTON  
*President, Chamber of Commerce  
of the United States.*

"Nineteen-fifty-five could be the greatest year in the nation's history [if] the tax drag on business is lessened."

"As of June 30, 1939, about 4,849,000 persons were receiving a federal check every month. In 1953, fourteen years later, 20,120,000 people were receiving a regular monthly check from the government. In short, the political potency of this factor has increased 400 per cent since 1939."

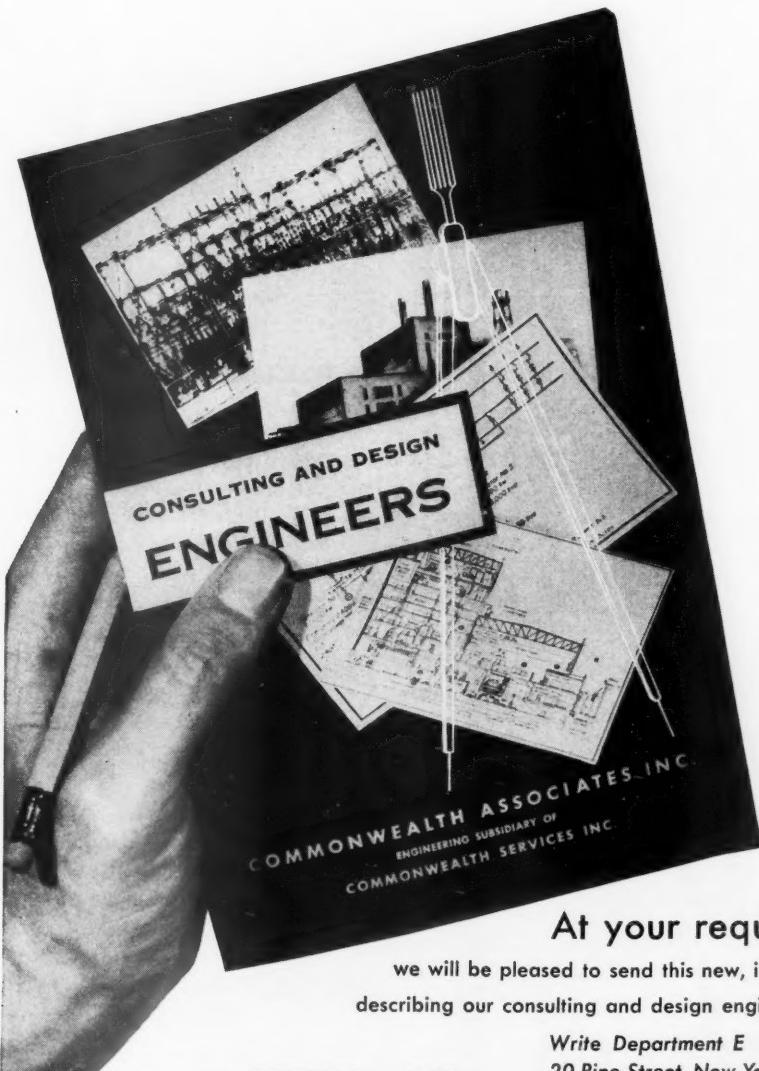
"To what extent do the American people wish to be compelled to invest in certain industries, whose losses they pay and whose profits if any, accrue to the state apparatus? Or do they prefer to make their own investments? The profits of private investment invariably flow back into society, after the state has taken its cut."

"Our people in their capacity as consumers have the opportunity to improve their high standard of living. Consumers' over-all demands, bolstered by the sustained high volume of business investment, will offer opportunities for expansion and profit to producers and merchandisers alert to the potentials our vast market affords."

"We are engaged in the operation of an economy which is a sort of mutual trusteeship. What do I mean by that? The days of the Andrew Carnegies and people like him are gone . . . Hundreds of thousands of stockholders own the great corporations. The United States Steel Corporation has almost as many stockholders as it has employees. Those stockholders, through the operation of some sort of voting system, employ a group of managers."

"We have it on scriptural authority that faith will move mountains—but I suppose this to mean that the actual moving job has to be done with the tools which someone has the faith to provide. The people who have invested in railroads have provided for America a great machine for moving mountains of goods and products—a machine which in World War II moved more than 90 per cent of all war freight. . . . On faith, a tremendous job has been done, striking advances have been made. And if that faith shall prove to have been justified, jobs bigger than we have yet seen will be done, and advances even more striking will be made as America moves forward to her great destiny."

"As with most precious things to which we become accustomed, we now accept [the Bill of Rights] as a matter of course, forgetting that behind every right which our forefathers wrote into the Constitution, they implied an equally precious responsibility. Yet at no time in our history has a better understanding of these responsibilities been more imperative than today. We are obligated to preserve local government's autonomy from central government, to keep the governing function close to the people, to refrain from avoidable or selfish demands upon government—to be, in short, the kind of self-reliant citizens that were contemplated when the Bill of Rights was proclaimed."

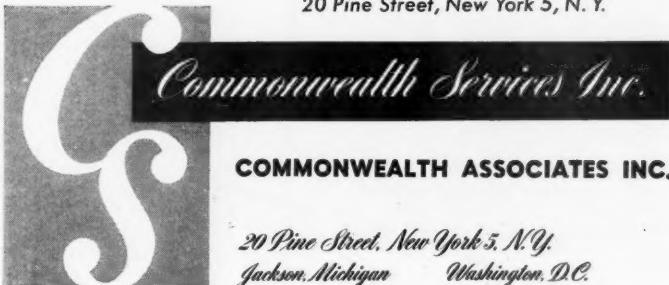


### At your request

we will be pleased to send this new, illustrated booklet  
describing our consulting and design engineering services.

Write Department E  
20 Pine Street, New York 5, N. Y.

INVESTIGATIONS  
REPORTS  
FINANCING  
ACCOUNTING  
TAXES  
INSURANCE  
PENSIONS  
DEPRECIATION  
VALUATIONS  
CONSULTING & DESIGN ENGINEERING  
RATES  
PURCHASING  
INDUSTRIAL & PUBLIC RELATIONS  
ADVERTISING



# POWERS

American®

presents the

# "Sky"

## the Ultimate

### IN TWO SIZES . . .

for all types of overhead work



SERIES AB-37 has a maximum ground-to-basket floor height of 37', enabling two men to work 42' above ground.



SERIES AB-43 carries two men to a comfortable working height of 48'. Maximum ground-to-basket floor height is 43'.

SKY-MASTER can be installed on a Powers-American Body which fits individual operating needs. It can be furnished with an engine-driven air compressor having air lines extended to outlets at work baskets.

POWERS-A  
McCABE-POWERS  
5900 NO. BROADWAY • ST. LOUIS 15, MO.

# "Master" Aerial Equipment



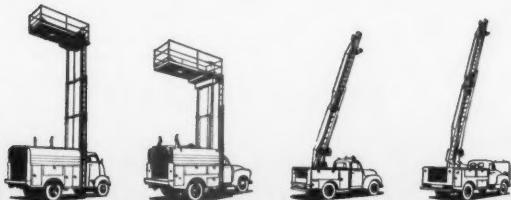
SKY-MASTER consists of a pair of hydraulically-actuated beams and a revolving mast—developed by Powers-American engineers into an aerial unit which is unsurpassed in versatility . . . safety . . . and operating simplicity.

Its inner beam can be positioned anywhere in an 85° arc. Its outer beam—to which twin, reinforced plastic work baskets are attached—moves hydraulically, in combination with drive pulleys and  $\frac{3}{4}$ " wire rope—to any point in a 265° arc. The revolving mast will rotate continuously . . . in either direction. An independent control lever for the mast and each beam is installed beside the work baskets.

For operator protection—insulation against 50,000 volts is provided on the outer beam . . . SKY-MASTER automatically locks in any position to which it is moved . . . hydraulic outriggers, on each side of the body, furnish absolute stability . . . constant flow of oil is maintained in cylinders at all times . . . and relief valves prevent overloading.

A complete description of SKY-MASTER'S construction, operation, and safety features is given in Powers-American Bulletin No. 410. A copy, with price information, will be sent—with no obligation—upon request.

**POWERS-AMERICAN . . .**  
**Your ONE SOURCE for AERIAL EQUIPMENT**



UP



OUT



OVER



DOWN



AMERICAN DIVISION

**AUTO BODY COMPANY**

625 CEDAR STREET • BERKELEY 10, CALIF.

# What . . . where . . . is your power plant problem?



PIONEER SERVICE AND ENGINEERING CO.

What are your capacity needs for the short term? For the long term? Where should new plants and transmission lines be located? What changes in fuels, in power generating techniques may be anticipated? Are your sub-stations adequate? Is your distribution system designed to handle the constantly growing residential, commercial and industrial loads?

Call Pioneer into your deliberations early to help in solving these problems, to design your new plants and other facilities and to fit it all in a sound financial structure.

Pioneer's various services present a complete and well rounded series of aids that can be packaged singly in a group, or as a whole, to fit your needs. Our booklet describes these special services—it's yours for the asking.

**Get our booklet—  
no obligation**

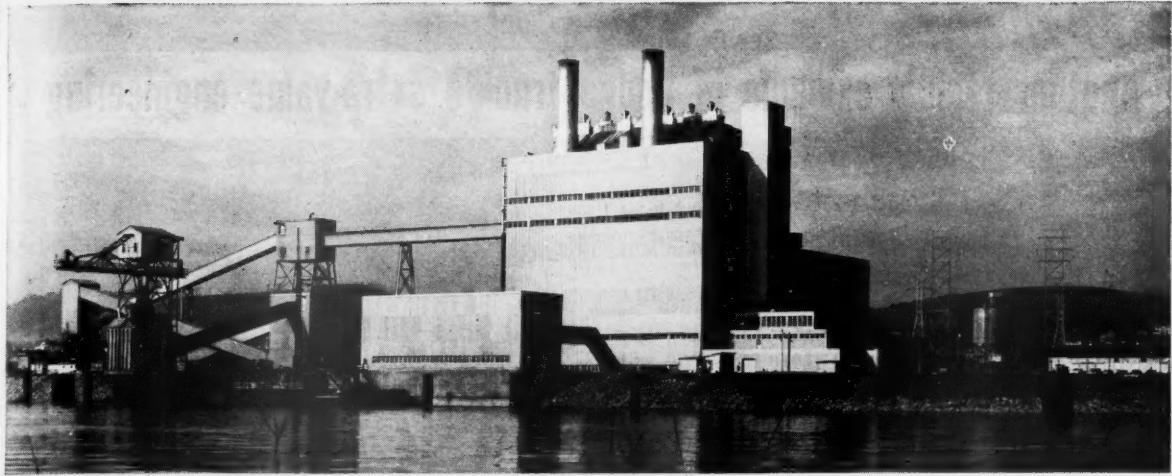
**If you can use . . .**

- Consulting Engineering and Power Plant Design Service . . .
- Financial Advisory Service . . .
- Stock Transfer and Dividend Disbursement Service . . .
- Purchasing and Expediting Service . . .
- Insurance, Rate, Accounting and Tax Advisory Service . . .
- Forecast, Load Study and Performance Analysis Service . . .



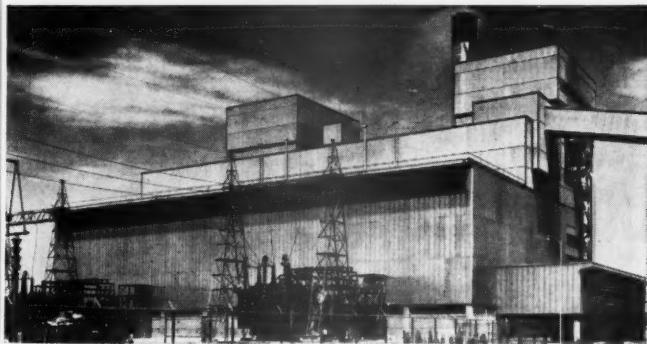
**Pioneer Service & Engineering Co.**

231 South La Salle Street • Chicago, Illinois



## Why fine new power plants everywhere have Q-Panel Walls

Builders of new power plants in all parts of the country have specified Q-Panel walls for the following very good reasons: 1. Q-Panels are permanent, dry and noncombustible, yet may be demounted and re-erected elsewhere to keep pace with expansion programs. 2. Q-Panels are light in weight, thus reducing the cost of framing and foundations. 3. Q-Panels have high insulation value . . . superior to a 12" masonry wall. 4. Q-Panels are quickly installed because they are hung, not piled up. An acre of wall has been hung in 3 days. For more good reasons for using Q-Panel construction, use the coupon below and write for literature.



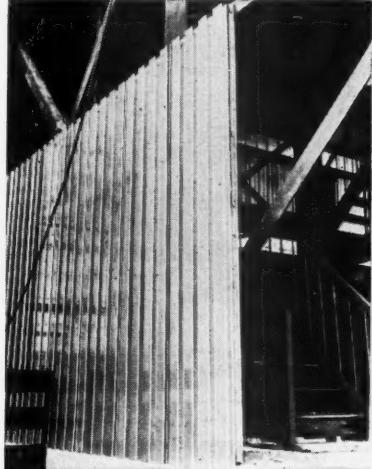
## Robertson Q-Panels

**H. H. Robertson Company**

2400 FARMERS BANK BLDG. • PITTSBURGH 22, PA.

Offices in Principal Cities

Q-Panel walls grace the new Elrama Power Plant (above) near Pittsburgh. It was designed by Duquesne Light Company's Engineering and Construction Department. The Dravo Corporation was General Contractor.



Q-Panel walls (above) go up quickly in any weather because they are dry and hung in place, not piled up.

More than 32,000 sq. ft. of Q-Panels were used to enclose the impressive Hawthorn Steam Electric Station (left) of the Kansas City, Missouri, Power and Light Company. Ebasco Services, Inc., designed and built the plant.



Please send a free copy of your Q-Panel Catalog.

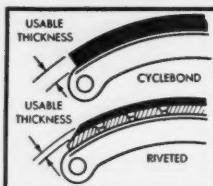
NAME \_\_\_\_\_

FIRM \_\_\_\_\_

ADDRESS \_\_\_\_\_

PU# \_\_\_\_\_

Another typical example of Dodge truck's extra-value engineering

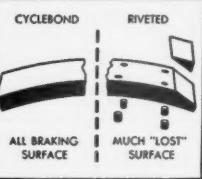


**More usable thickness.**

Dodge truck Cyclebond brake linings can be used virtually through their full thickness. This gives the linings many thousands of miles of added life. Riveted linings should be worn only to rivet heads.

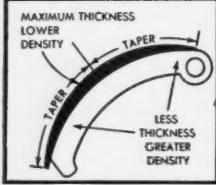
**More usable surface.**

Every square inch of Cyclebond lining area is braking surface. Riveted linings, because of rivet holes and mitered ends, have up to 10% less braking surface.



**Tapered for easy stops.**

Cyclebond lining is more tightly compressed at ends, gives a gradual taper. Thick center of lining makes first contact...increased pressure brings the ends into contact. Braking is smooth, even.



# Why you go more miles before relining with Dodge truck brakes!

You can be sure of lower brake maintenance, more miles before relining, with Dodge truck brakes and famous Dodge truck Cyclebond linings. And that's in addition to the quick, positive stops, the smooth action, for which Dodge truck brakes are famous.

Long-lasting, reliable brakes are just one example of the extra-value engineering that means more for your money when you buy...more money saved over the life of your truck. Get the facts on how extra-value engineering saves you money; see your dependable Dodge Truck dealer.

**DODGE "Job-Rated" TRUCKS**  
A PRODUCT OF CHRYSLER CORPORATION

ANOTHER MOTOROLA FIRST

# NEW ALL TONE SUPERVISORY CONTROL



**More Reliable Supervisory Control offers a further means toward optimum utilization of man-power and helps alleviate the problem of men "going stale" on the job.**

Motorola's new supervisory control system for remote operation of unattended apparatus, places *centralized control* at your load dispatcher's fingertips. It optimizes system co-ordination and efficiency and helps sustain operating profit at a higher level.

Accurate and reliable functioning of terminal apparatus is assured by coded signals from and to the central dispatch console. This all tone system utilizes any audio channel with *maximum security*. The signals go through the entire system unchanged and do not require synchronization or adherence to close time tolerances.

Exclusive multiple selection and simultaneous operation of remote apparatus at one or several stations is optionally possible without additional equipment for selecting and operating the combinations.

**EXCLUSIVE ALARM MEMORY CIRCUIT**—The important flashing alarm indication will always remain on the specific escutcheon until cancelled by *pulling* main reset key even though alarm bell and light are cancelled by alarm reset, or other points on systems are selected, operated and reset.

The Add-a-Point feature makes adequate provisions for future expansion of the system. A full complement of wiring in each relay case at the start so that additional point functions can be added easily and economically.

**Motorola**  
**Communications & Electronics, Inc.**  
A SUBSIDIARY OF MOTOROLA, INC.

4501 W. Augusta Blvd., Chicago 51, Illinois • Rogers Majestic Electronics Ltd., Toronto, Canada

# YOUR Special Advantage for FEBRUARY!

... this is the SPECIAL ADVANTAGE STICKER which dozens of companies are using this month on the front cover of Electrified Industry. →



GREATEST INVENTION of Thomas A. Edison is distributed electric power. Now we provide reliable electric service, wherever and whenever you wish.

**CONSUMERS POWER COMPANY**

Pass to \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

THE SPECIAL ADVANTAGES of electric service include: . . Convenience . . Flexibility . . Instant Starts . . Economy . . Reliability . . Cleanliness . . Good Regulation . . Ability to take Overloads . . and the Cooperation and Advice on Electrical Problems which most power companies offer.

Customers are reminded of you and of the SPECIAL ADVANTAGES of being on your lines. In addition your stickers help them route your messages to additional readers.

Some companies make up stickers which carry their own slogan (a good idea). Others have Reddy Kilowatt remind the readers that electric power is their willing servant.

Power salesmen make friends for your companies and add to your "net divisible." Years ago they decided that they needed help to overcome the effects of the competitive power, diesel-and-steam, agin-the-utilities magazines that they saw on their customers desks. They helped create the picture magazine which tells the true story that electricity, properly used, is worth many times its cost.

They use this magazine to make 21¢ calls for them in between the \$5 and \$10 calls they make in person.

By using Electrified Industry they are able to maintain better-than-ever customer contact and increase the net revenue of the utilities.

## ELECTRIFIED INDUSTRY and *Today's Business*

Martin Publications - 20 No. Wacker Dr., Chicago 6

# BEFORE YOU BREAK GROUND

Construction of a new plant starts when the steam shovel takes its first bite of earth. But the actual building process begins *before* you break ground.

It begins when the need for new plant facilities is recognized and engineers are called into action. Then it develops on the drawing board—through plant layouts, working drawings, engineering specifications. It requires consideration of engineering and production techniques—analysis of all factors that must be taken into account before construction can start.

Ebasco skilled engineers and constructors have experience in every phase of the building process—from preliminary planning right up to a plant's successful operation. This experience has enabled Ebasco to complete more than two billion dollars' worth of new plant design and construction for many industries, in many parts of the world.

The engineering and construction firm you select to design and build your plant may well hold the key to its future success. If *you* are considering such a project, send for our booklet, "The Inside Story of Outside Help." It describes our engineering and construction services as well as the wide range of consulting services Ebasco offers business and industry. Write: Ebasco Services Incorporated, Two Rector Street, New York 6, N. Y.



ENGINEERS • CONSTRUCTORS  
**EBASCO**  
BUSINESS CONSULTANTS

NEW YORK • CHICAGO • DALLAS • PORTLAND, ORE. • WASHINGTON, D. C.

Appraisal • Budget • Business Studies • Consulting Engineering • Design & Construction • Financial • Industrial Relations • Inspection & Expediting • Insurance, Pensions & Safety • Purchasing • Rates & Pricing • Research • Sales & Public Relations • Space Planning • Systems & Methods • Tax • Traffic • Washington Office

TAKE THE HIGH ROAD

TAKE THE LOW ROAD

TAKE MOLONEY!



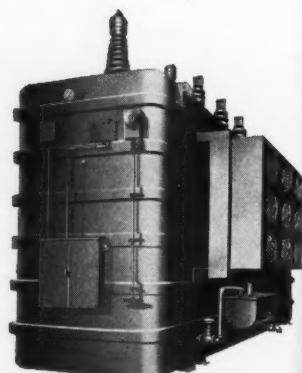
THE SIGN OF QUALITY

Moloney Transformers, proven dependable performers, provide an uninterrupted flow of power... up along your high voltage transmission lines... down to your lower voltage distribution feeders.

Moloney has paved the highway of high voltage and Kva power transformers in their newly completed manufacturing bay... and Moloney HiperCore Transformers have provided dependable avenues of distribution... with no detours.

Whether you need high road power transformers... or low road distribution transformers... make them "Moloney All Along the Line." For Moloney is the "Sign of Quality"... of 58 years of experience in the exclusive production of transformers.

ME54-42



**M O L O N E Y   E L E C T R I C   C O M P A N Y**

Power Transformers • Distribution Transformers • Step Voltage Regulators • Regulating Transformers • Load Tap Changing Transformers • Load Center Transformers • Unit Substations • Network Transformers • Constant Current Transformers • Capacitors • Transformers For Electronics

SALES OFFICES IN ALL PRINCIPAL CITIES • FACTORIES AT ST. LOUIS 20, MO. AND TORONTO, ONT., CANADA

PUBLIC UTILITIES FORTNIGHTLY—FEBRUARY 3, 1955



# UTILITIES

## *A·l·m·a·n·a·c·k*

### FEBRUARY

<b>Thursday—3</b>  Missouri Valley Electric Association begins industrial and commercial sales conference, Kansas City, Mo.	<b>Friday—4</b>  Southern Gas Association begins work on consumers' premises conference, Oklahoma City, Okla.	<b>Saturday—5</b>  Edison Electric Institute, Home Service Committee, ends 2-day meeting, Washington, D. C.	<b>Sunday—6</b>  American Gas Association, Accident Prevention Committee, will hold meeting, Richmond, Va. Feb. 24, 25. Advance notice.
<b>Monday—7</b>  Western Winter Radio-Television and Appliance Market begins western merchandising mart, San Francisco, Cal.  ②	<b>Tuesday—8</b>  National Adequate Wiring Bureau will hold annual conference, Chicago, Ill. Feb. 24, 25. Advance notice.	<b>Wednesday—9</b>  American Water Works Association, New Jersey Section, holds luncheon meeting, Newark, N. J.	<b>Thursday—10</b>  Pennsylvania Electric Association, Transmission and Distribution Committee, begins winter meeting, Pittsburgh, Pa.
<b>Friday—11</b>  American Water Works Association, Indiana Section, ends 3-day annual meeting, Indianapolis, Ind.	<b>Saturday—12</b>  Southern Safety Conference-Exposition will be held, New Orleans, La. Feb. 27-Mar. 1. Advance notice.	<b>Sunday—13</b>  Public Utility Buyers' Group, National Association of Purchasing Agents, begins annual midwinter conference, Houston, Tex.	<b>Monday—14</b>  National Rural Electric Co-operative Association begins annual meeting, Atlantic City, N. J.  ③
<b>Tuesday—15</b>  Pennsylvania Electric Association, Relay Committee, begins winter meeting, Pittsburgh, Pa.	<b>Wednesday—16</b>  Louisiana Telephone Association begins annual convention, New Orleans, La.	<b>Thursday—17</b>  Edison Electric Institute, Residential Promotion Committee, begins meeting, New York, N. Y.	<b>Friday—18</b>  National Society of Professional Engineers begins spring meeting, Charlotte, N. C.



*Photo by Symons Flying Service*

### **Rescue Operation**

*Southern California Edison survey and maintenance crew takes to the hills in sno-motor and sled.*

# Public Utilities

**FORTNIGHTLY**

VOL. 55, No. 3



FEBRUARY 3, 1955

## Some Problems of Private Nuclear Development

*At the outset, the harnessing of nuclear reactors to ordinary transmission and other electric utility system lines will be pretty expensive business. This article discusses some of the problems which will confront the electric utility, aside from purely engineering problems, in translating the great boon of atomic fission into conventional and routine public service. The author assures us, however, that atomic power is on its way and when it gets here the world will be assured of virtually inexhaustible supplies of fuel for power.*

BY A. BRYAN MARVIN\*

THE foregoing title, "Some Problems of Private Nuclear Development," certainly does not restrict the author in any way and there is definitely no shortage of material.

I must qualify, at the outset, any inference that this is a scientific or technical article. The author is neither a physicist nor an engineer. But there are plenty of other problems in private nuclear develop-

ment and those are what I propose to discuss.

Back in 1938, when this writer was studying in the kindergarten of modern atomic physics, his teacher was working for a doctorate. The teacher's specialty was a certain metallic crystal. We had some in the laboratory and for fun we used to do some of the experiments that our instructor had described in his thesis.

The crystal did some strange things when subjected to temperature changes. And its electrical properties seemed to

\*Press relations and public information department, Consolidated Edison Company of New York, Inc. For additional personal note, see "Pages with the Editors."

## PUBLIC UTILITIES FORTNIGHTLY

vary, depending on whether electrodes were connected to the X, Y, or Z axis. By now, telephone industry readers have probably guessed what it was. The fact that we saw no commercial application for germanium is what I think of nights when I can't get to sleep.

So the author is not an inventor, either. Nor does he have any security clearances. But all this does not bar discussing this topic from the layman's or businessman's viewpoint. The reason is because the primary problem of atomic energy does not lie in the technology of the atom. It lies in the economics of the atom. And it is a well-known truism that any fool can talk on economics.

**T**HREE is a secondary problem in atomic energy today and that is in the field of semantics. The general public today is largely ignorant of atomic semantics. In fact, the very phrase "atomic power" is generally misunderstood. Atomic power, whatever it is, has captured the public imagination. This was not a difficult feat. Public imagination was recoiling in horror from the bomb when atomic power entered the scene. Public imagination, on the rebound and suffering from a guilt complex, seized on atomic power.

Even the politicians, a group which does not generally originate an opinion trend but is content to follow established lines of thought—this group quickly grasped the appeal of atomic power. There are politicians today who would like to completely ignore the weapons aspect of this country's atomic program and say instead that the entire \$13 billion was spent on reactor research. Dollar figures are hard to come by in the field of atomics, but it appears that of the \$13 billion, only a very small

percentage has gone into reactor research, and how much of that was for the atomic submarine and airplane is purely a guess on this side of the uranium curtain.

Actually, there is no such thing as atomic power, if you will only stop and examine the words from an engineer's viewpoint. Atoms contain potential energy which can be released either through fission or fusion. To become power, this energy still has to be translated into work potential. To translate energy into work potential an apparatus is needed.

**C**ONVENTIONAL fuels are changed into work power generally through the medium of a steam cycle or a compression chamber. In the case of the atom's potential energy, the steam cycle appears to have the edge on the compression chamber.

To be really useful to man, work power must be convenient and flexible. Electricity is exactly this, both in fact and in the public mind. The public, therefore, when it thinks of atomic power, thinks of it as electric power in the house wiring, power which has been extracted from the atom and converted into electricity.

In considering this process of translation, it must be examined from the viewpoint of an engineer to see if it is possible; from the viewpoint of the company's financial officer to see if it is economically feasible; and from the viewpoint of an attorney to see if it can be done legally.

As for the first of these viewpoints, the newspapers tell us that the engineers can indeed translate the potential energy of the atom into electricity. Other speakers today have indicated some of the problems the engineers face. But they are possible of solution.

Let us assume they will be solved.

## SOME PROBLEMS OF PRIVATE NUCLEAR DEVELOPMENT

**I**NSTEAD, let us look at the atomic power plant from the financial officer's vantage point. This individual has two work tools which serve him the way physics and chemistry serve the engineer. One is the balance sheet and the other is the income statement.

The balance sheet, first. This is the document which appears in the company's annual report. In substance, it adds up on one side what the company has in the way of plant, inventory, cash on hand, and debts it expects to collect. On the other side, the balance sheet presents a story of where the funds and credit came from to make the company possible.

These two sides of the balance sheet must balance or there will be serious trouble for the company.

If the company is an electric utility and it plans to add a nuclear fuel generating station to its roster of generating facilities, someone has to put up the money for it. In the final analysis, that money has to come from the public under the private enterprise system. Only the government has the right to impose a tax to raise funds. And, for a private company to get money from the public, it has to pay rental on the funds borrowed either in the form of interest or dividends.

Payment of this rental fee appears on the income statement, which lists funds collected and funds disbursed.

A financial officer, by definition, is a worrier. From an engineer's viewpoint he often worries about some ridiculous things. From a pure scientist's viewpoint, this intensely practical individual is simply money mad and should be kept entirely out of the laboratory. But you can't keep him out. The engineer and even the scientist need salaries to keep their families happy. They need desks to sit at and slide rules to play with and paper to write on if inspiration should come their way. Providing all these things is the financial man's responsibility. It is his chore to see that ends meet for the company.

**I**N a business-managed company, this individual's thinking permeates the entire corporate structure. Even the engineers are accustomed to thinking in dollars as well as in tensile strengths and corrosion resistance.

When these individuals hear about a plant shutdown like the one at Chalk River,<sup>1</sup> they turn pale green. If a \$100,000,000 nuclear plant in private hands had

<sup>1</sup> The Canadian "NRX" reactor at Chalk River, Ontario, was shut down in December, 1952, rather suddenly. Improper operation of the control rods caused a rapid reaction that burned out the aluminum sheaths covering about 10 per cent of the uranium rods in the reactor; melting and oxidation of the uranium released 10,000 curies (an extremely high level of contamination) of radioactive fission products in the cooling water. Contamination was said to have spread through the entire building housing the reactor and to the associated equipment.



**Q**"FOR numerous reasons which include the international situation and government policy, there is a rush to get peacetime applications of the atom developed. In the field of atomic energy for the first time local electric utilities are doing research of the type that has historically been performed by manufacturers. Con Edison is one of many companies putting money and engineering man-hours into atomic research."

## PUBLIC UTILITIES FORTNIGHTLY

to shut down for only three months in order to replace a calandria, the rental on the plant investment would run to something over \$800,000, assuming the most favorable financing. A charge of this magnitude on the income statement, with no income at all to counterbalance it, would be a stunning blow. In the case of conventional equipment, the engineers have a body of experience on which to base their judgments. There is no corresponding collection of knowledge in the atomic field to date.

If an atomic fuel generating plant were to fall on its nose after producing only a few kilowatt-hours, those would be very expensive kilowatt-hours indeed. And yet there are many individuals on the lecture platform today who describe atomic power as cheap power. Many of these speakers are people who should know better.

Take at random any brand-new steam electric generating station. If the turbines there were supplied with high-pressure steam by some magic system which required no fuel, no boiler or boiler house, no boiler operating labor, no boiler house real estate or property taxes (in other words, if the steam were completely free) it would amount to a reduction of less than 14 per cent in the amount an average New York residential customer pays for a kilowatt-hour from that station. The major expense involved in selling electricity is incurred in conveying the energy from throttle valve to customer, billing and collecting for it.

To the best of my knowledge not even those who shout "giveaway" at the entry of private enterprise into the atomic program have said that a reactor is going to be given to any company or that fissionable

materials are going to be supplied free of charge.

There is another feature of atomic energy that disturbs the financial man. That is the risk of an atomic incident. The claims following a real atomic incident could be sufficient to bankrupt the largest American company unless it were properly insured. The engineers say they can design a foolproof reactor. It is a fact that in America's atomic program to date there have been absolutely no atomic incidents.

There are a multitude of reactor studies. There is a saying in the atomic field that if you take one engineer, one physicist, and two bottles of beer, bring them all together for fifteen minutes, you will have a new reactor design.

Many of these studies get to a cost-minded engineer, specially now that private industry is being permitted a peek. In the columns of figures, he finds an allowance for insurance. This surprises him since no insurance company or group of companies has set a rate yet. When he asks, he is told that the same figure has been used for the atomic plant as is currently being paid for the plant using conventional fuel. One does not have to be a graduate engineer to appreciate that the risk of a reactor and the risk of a pressure vessel such as a boiler are not one and the same.

Over at Consolidated Edison, we are talking to manufacturers who say they can build for us a plant powered by the fission of atoms. Our cost-conscious engineers have opened up a whole series of questions similar to the two I have attempted to outline. At first, these problems seem to be solid fences across the road that leads to translation of atomic energy into electricity by private enterprise. But gradually, one

## SOME PROBLEMS OF PRIVATE NUCLEAR DEVELOPMENT

---



### New Language for the Atom?

**T**HE general public today is largely ignorant of atomic semantics. In fact, the very phrase 'atomic power' is generally misunderstood. Atomic power, whatever it is, has captured the public imagination. This was not a difficult feat. Public imagination was recoiling in horror from the bomb when atomic power entered the scene. Public imagination, on the rebound and suffering from a guilt complex, seized on atomic power."

---

by one, they are being solved. And when they are solved, they are no longer a fence in the road. The broken fence becomes a part of the surface of the road itself, making it broader and smoother.

OVER the years, we in the electric industry have developed a way of handling innovations in the art. Our suppliers, the manufacturers of the equipment we use, generally do the laboratory work, the research that is needed to meet our requirements, which we specify.

But eventually, in any new development, the project finally gets to the stage where it

outgrows the laboratory. Some company has to serve as a pioneer and sponsor a field trial. And in the field problems come up that were not even suspected during the laboratory runs. The solutions to these problems result in engineering refinements, modified designs, more successful economic operation.

For numerous reasons which include the international situation and government policy, there is a rush to get peacetime applications of the atom developed. In the field of atomic energy for the first time local electric utilities are doing research of the type that has historically been per-

## PUBLIC UTILITIES FORTNIGHTLY

formed by manufacturers. Con Edison is one of many companies putting money and engineering man-hours into atomic research. This corporate effort is properly co-ordinated and it speeds up the research time clock substantially, helping equip science with seven-league boots.

**B**EFORE we get too hopeful, however, let us pause an instant to look at the atomic program from a lawyer's desk. This lawyer is concerned not only with the revised version of the Atomic Energy Act. Since he is a utility company lawyer, he has had experience with many other laws, local, state, and federal, for many years. The Atomic Energy Act is merely one more form of regulation piled on top of the many existing layers.

And, believe me, the utility industry is thoroughly regulated. Since utilities use the streets of communities to distribute their products, many of their actions are subject to review at the community level. In New York state they have had a state body since 1907 empowered to examine their books and determine the fairness of their rates. This state commission's powers extend even further into the fields of safety and financing. To illustrate, every cost-plus contract for more than \$25,000 that utilities want to make must lie before the commission for forty-five days before it can take effect. During that period, the commission has the right to object to it.

In the utility field, the Securities and Exchange Commission and the Federal Power Commission are also active at the national level.

Now, the lawyer notes, the Atomic Energy Commission enters the regulating business. The new law is throughout what an attorney calls a permissive law. That is,

it states in very broad terms the aims of the government and it gives the commission the power to determine the details by which these aims are to be met. A permissive law is administered by rules and regulations. In the case of atomic energy, however, these rules and regulations have not yet been issued. There is considerable amount of doubt about what they will be when they are issued. If a private company does not trust the Atomic Energy Commission, it can have no interest in the possibility of atomic energy under the present law.

For example, there is a section in the new law that requires a company building an atomic facility to secure a construction permit. In applying for the permit, the company is to specify the completion date. And, in the event construction runs past the target date, in the language of the act, "the construction permit shall expire, and all rights thereunder be forfeited, unless . . . etc., etc."

The market for half-built reactor plants is not promising.

**A**ND look at the problem of ownership. If a company operates certain types of reactor, some of the U238 fed into it as company property will be converted to plutonium. At the instant this transformation takes place, the plutonium legally becomes the property of the government. This can lead to some very fine legal distinctions.

The U235, of course, belongs to the government from the time it is separated from the rest of the ore's constituents. Now, how does one go about carrying U235 from place to place? When a company sets about carrying things in interstate commerce, there is a commission with which to con-

## SOME PROBLEMS OF PRIVATE NUCLEAR DEVELOPMENT

tend. The ICC evidently has not been concerned with the government's transportation of fissionable materials if the rule books are any index of its interest. But what rules will they adopt when private industry sets about duplicating the government's work?

And then there is the matter of licensing of individuals. Congress, in writing the new Atomic Energy Act, was fairly specific in its license requirements. Everything and nearly everyone connected with the application of nuclear power needs a license, even the operators of the completed plant. But under certain codes, these operators will also need stationary engineer's licenses and other approvals. The AEC's licensing requirements are not yet known, but there are a number of qualified physicists and chemical engineers who will have a lot of homework to do if they expect to pass their stationary engineer's examinations.

AND look at the matter of patents. There has been considerable discussion of this point. In the field of fissionable material, it is pretty hard to invent anything unless you have access to a body of information that is classified and materials that are government-controlled. This means that anyone or any company with a good patentable idea in the field of atomics is more than likely working under either a contractual or quasi contractual relationship with the AEC.

If AEC is going to be strict about this,

there is at the moment practically no chance for anybody to acquire any patent rights in the atomic field.

One may wonder why private enterprise is at all interested in the atomic program. The problems seem to go on and on, with each solution leading to a new set of problems. It might be appropriate at this time to fall back on the newspaperman's formula and attempt to define the six W's of atomic energy: The who, what, where, when, how, and sometimes why.

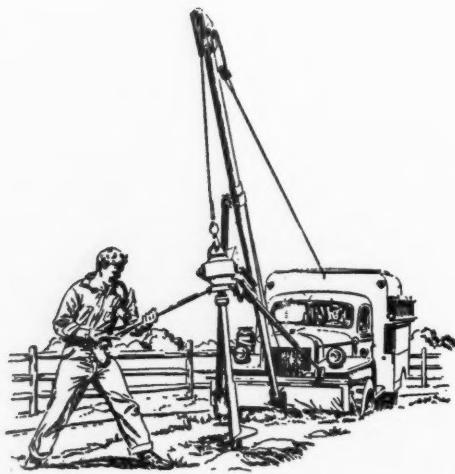
The why of atomic energy is easy to answer. If our fuel needs keep on growing as fast as they have in recent times, we will be forced to develop the atom as a source of energy. It is a simple matter of survival.

As for what the atomic program attempts to do: it wants to tap the energy potential of the atom at a minimum cost.

By whom should this be done? Preferably by people and companies already in the business of supplying energy. Manufacturers should build the required atomic utilization equipment and local electric companies should operate the plants.

Where is it to be done? The answer is obvious. First of all in those areas where the cost of fuel is highest. As progress brings the cost of atomic power down to the point where it can compete with conventional fuels, it will break into the fuel market first of all in the high-price areas.

And the answer to when is it to be done is the easiest of all to provide. The answer is: as soon as possible.



## Color Phones Are Just the Beginning

At last, with something to really sell, telephone management studies merchandising, as it has wrought such transformations in other business. Both Bell and independents seek greater revenue to meet the charges on vastly greater plant investments.

By JAMES H. COLLINS\*

**R**IP VAN WINKLE fell asleep on the mountain and, after twenty years, woke up to a changed world.

They are telling the telephone salesman that he has been asleep for a dozen years, because he had nothing to sell, and now selling days are here again, as telephone companies begin to catch up with their backlog of held orders, and he had better come out of the moth balls.

So they tell him. But it is unfair to the telephone salesman. Because, all these years, he has been selling whatever they gave him to sell—business installations, and PBX's, and service that could be ren-

dered with existing plant, while they were laying new cables and building new exchanges and making new instruments. The big backlog has been in residence service. He would dearly have loved tackling that, but was restrained.

Rip Van Winkle has been far from napping, but his world has been transformed. He hears talk about merchandising, and impulse sales, and packaging, and displays—is this the telephone business, or has he waked up in a supermarket?

They are saying that the telephone customer must be given what he wants, when he wants it, even though he doesn't know what it is.

They are telling the salesman that the

\* Professional writer, resident in Hollywood, California. See, also, "Pages with the Editors."

## COLOR PHONES ARE JUST THE BEGINNING

telephone business must do as others do, and get its share of the consumer dollar.

"What is our share?" he asks.

"Well—er—we will have to make a market survey. But remember, the customer is always right."

**N**ow, this is radical talk in a business that has always been production-minded. The engineers and scientists have accomplished wonders in research, invention, and design, but from the angle of what they decide the customer ought to have. What he might think he would like was something else again.

The technological watchwords have been "Papa knows best," and "Uh-uh—bad for baby!" But today, in telephone circles, it is all right to say so, and that is certainly a changed world.

To illustrate: Telephones have been black since long before Henry Ford said the customers could have any color so long . . . They occupied both hands, and were attached to the wall.

There came a time when the customer heard about French phones, and thought he would like to have one. In France, the government ran the service, and the customer might wait for months before getting a line, even in normal times. When he got it, he went out and bought his own telephone instrument. That was a curious combination of public ownership and private enterprise. French manufacturers were in competition to give the customer what he wanted, and designed a phone that needed only one hand, and could be set on a table or desk. Strange that in so artistic a country they did not think of color!

**I**n this country, telephone engineers for long had doubts about the French

phone, while using it themselves. Now they are going to free the customer's other hand, with a phone that need not be picked up. The customer has often bought gadgets to make phone talk private. Now the engineers are developing phones that give privacy. Both Bell and independents are working on such improvements, and Bell is said to have some 400 new features in service and equipment, things the customer wants, or will want when he sees them.

A long time ago an immigrant boy started selling fruit from a wagon in New York, got into the produce trade, got rich, got a showy apartment.

"Could I have a gold-plated phone?" he asked, wistfully. Born too soon! Today, a phone salesman could probably get it for him.

Since the war, telephone systems have grown beyond all expectations, and are still growing. Enormous new investments have been made in facilities. More revenue is needed to pay charges on new capital. The best way to increase revenue is to sell more service. Hence the "new look" in the telephone business.

Backlogs have not yet been completely caught up, and they are "firsts." Merchandising stands second, or even third, for improved service to present customers is important—selling implies a quality article. However, in the southern California area the backlog is now only a few thousand held orders, compared with 150,000 at war's end.

**S**ELLING is still selective in residence service, because not all neighborhoods have, as yet, the new facilities needed to cancel all held orders. But there are now many neighborhoods where surplus facilities enable the salesman to ring doorbells, and

## PUBLIC UTILITIES FORTNIGHTLY

wherever there is a residence phone, there is a potential customer for an extension. A new residence phone requires a plant investment of \$400 to \$500, and pays off over a number of years. An extension takes only an additional instrument, and brings in immediate revenue. Color and two-tone phones require installation charges, but no additional rate. Lighted dials, cutoffs on extensions, answering and hard-of-hearing sets carry monthly charges as well.

Today, the installer, arriving with the new residence phone, carries two instruments into the house.

"While I'm here," he suggests, "it will be easy to put another phone in the kitchen, or a bedroom—it might be handy in an emergency."

That is a revenue-producing sales pattern used by both systems.

"Why not put it in a package?" Pacific Telephone employees have asked. "Instead of promoting one residence phone, and then selling an extension, offer them together, with a price tag: 'House phone and bedroom phone, \$6.50 a month.'"

The "big economy size" in another form, and the "impulse sale" has been taken over by both telephone systems, in the outdoor phone booth.

When the supermarket makes a jumble display of tomato juice in an aisle, exactly

the same brand carried regularly on the shelves, and at the same price, it sells from the jumble, and loses no sales from the shelf.

**W**HEN an outdoor booth is set up near an indoor booth, the new installation increases traffic, and there is no drop in the indoor booth. Bell has lately started setting up attractive aluminum outdoor booths, and they show increased traffic over the first rather somber green booths. Thousands of eating places over the land proclaim the simple directive word EAT. Something in human nature that leads people seeing a phone to call up Aunt Hattie suggests that TALK might become a similar directive.

Last fall, "Mother Bell" was able to announce color phones in a big national advertising campaign. For nearly fifteen years Bell national advertising had been institutional, and toll traffic promotion. Color phones are like new models in cars and refrigerators, brought out to make the customers dissatisfied with what they have. "See them at your dealer's," says national advertising, and the "dealer" in this case is the regional Bell company, which takes it from there, with its own promotion.

Pacific Telephone people decided that this signaled something broader than sell-



**G**"In this country, telephone engineers for long had doubts about the French phone, while using it themselves. Now they are going to free the customer's other hand, with a phone that need not be picked up. The customer has often bought gadgets to make phone talk private. Now the engineers are developing phones that give privacy. Both Bell and independents are working on such improvements, and Bell is said to have some 400 new features in service and equipment, things the customer wants, or will want when he sees them."

## COLOR PHONES ARE JUST THE BEGINNING

ing-time-is-here-again; that the telephone business needed modern merchandising, in keeping with postwar changes.

In other business merchandising stands for self-service, one-stop shopping, drive-in, cash-and-carry, packaging, impulse selling. All based on what the postwar customer wants. Charge accounts, deliveries, telephone ordering, retail sales people, have all but disappeared in certain lines of retailing, and are passing out in others. The postwar customer wants to drive in, buy food and everyday necessities in one place, check the baby and the dog, hear music, pay cash at the desk, and take everything home in her own car.

**M**ERCHANDISING begins with and is guided by consumer market surveys, to find out what the customers want. Market research has become a formidable business in itself, with its quizzes, polls, and statistics.

Pacific Telephone made a unique market survey by asking its 80,000 employees what they thought the customers want. A committee was set up for the whole system, ranging from Washington to California, and information was gathered in meetings and interviews. Employees were told that telephony needed merchandising activities, supplementing its engineering achievements, and were asked to talk freely, criticizing if necessary—it was all in the family.

What do people on switchboards, in warehouses, out in field crews, know about merchandising?

Plenty! They are consumers themselves, influenced in their own purchasing by adroit merchandising, seeing overlooked possibilities in their own business.

They think the spirit of order-taking

has prevailed too long in telephony, the customer coming to the company, where information about service should be taken to the customer. Displays should be set up in telephone commercial offices, letting the public see what is available, instead of just hearing about it. New uses should be promoted by showing the goods.

**M**ERCHANDISING requires special abilities, say the employees. Engineers have their own job to do, have neither the time nor the ability for merchandising. A separate merchandising department would spread the "new look" through the entire organization. During the depression Pacific Telephone had a thoroughly sales-minded organization, because selling service and averting disconnections were vital to jobs. That employees can sell was amply demonstrated then.

But employees need sales training, and information about what the company has to sell, printed material, and sales aids. They can report sales leads. They feel that better knowledge of operations outside their own departments would help. They maintain that latent sales ability among younger employees might be encouraged by showing that selling offers opportunities for advancement to those who are qualified.

Some employees welcomed the new-type phones to meet customer needs as a step in the right direction. Better inspection of phones on the customer's premises, such as replacing frayed cords, cleaning up dirty phones, and the like, was advocated. Color phones they thought were fine—but ten years late.

To sell toll service, it was suggested that the customer be given a sample call when a new phone was installed. Also, that the



### Telephone Companies Are Back in the Sales Business

**F**OR fifteen years, since the first defense program of World War II, the telephone business has been thought of as one of shortages, backlog, spiraling costs, enormous appetite for fresh capital, and continual pleas for higher rates. Now, at last, it has goods to sell, and will steadily have more. The telephone salesman is back, ringing doorbells, offering new services, urging greater uses. That is something the American customer thoroughly understands. The business that puts itself forward, spotlighting its goods in the show window, seeking orders, is considered a healthy business, doing its job in the national economy."

---

company give results of games, weather reports, and where-to-buy-it service, like time service.

"Trade-ins" are part of other business, like automobiles and appliances. Why not make a "package" of discontinued two-piece phones, reconditioning and perhaps painting them, and offering service for a reduced rate?

**T**HREE was a feeling that rate structures and billing might be simplified for better understanding, that customers

were in the dark as to what they were paying for.

Also, that better words might be adopted for things bearing technical names. "Extension" is telephonese of long standing—but what the customer mostly wants is a "long cord." Call it a "bedroom phone." The 4-party line is really a 4-family line. Merchandisers in other lines of business pay a great deal of attention to words and phrases, because they are selling tools.

The warehouse people had some very practical merchandising suggestions. For

## COLOR PHONES ARE JUST THE BEGINNING

example, there were complaints of delay in making installations after service had been ordered. These delays often arise in the supply department. Stock records are not what they should be. The purchase department orders on schedules that cause delayed deliveries. There are shortages in some equipment, and overstocks in other things.

Why not package installations? Instead of putting in orders for the various components required for a given installation, why not put up the complete assembly, hand it out to the installer by number? Working far enough ahead, this would head off shortages of single parts—the hoss would never be lost for want of a shoe nail.

These samples of employee thinking show that people on the job are alive to the trends of the times.

Drive-in is a big word today. People drive in to eat, to shop, to see movies, to bank—why not a drive-in public phone? That was suggested. It is something that should interest the engineers.

Shades of Alexander Graham Bell—who in his day was a telephone merchandiser!

**T**HIS mass of employee suggestions, classified in a hundred pages for the different departments of Pacific Telephone, lays foundations for a broad development of selling and promotion, to increase revenue.

"And it contains headaches for every department for several years to come," is the comment of a committee member.

Going out, ringing residential doorbells, the phone salesman finds that backlog has become a legend.

"Sometimes I wonder how I ever get along without a phone," said a Santa Mon-

ica woman, "but I know I couldn't get one for at least two years."

Overheard by a telephone man, who looked up records, it was found that she had never made application for a phone, and that there were surplus facilities in her neighborhood. She got a phone immediately.

This is independent territory, and the General Telephone Company of California, now in position to sell residence service in various areas, has discovered that waiting for customers to come in is a mistake.

With ample facilities in the new Lakewood area, north of Long Beach, the company sent salesmen calling on home owners. Out of more than two thousand contacts they found more than a thousand people at home, and sold 385 new residence installations.

**I**N another "cold turkey" canvass people were found at home at more than half of some 4,000 places, 385 new installations were sold and many extensions, adding some \$20,000 new revenue. The popular impression that phones are still hard to obtain *h a n d i c a p s* revenue-producing changes in such service as conversion from party to private lines. Toll traffic is hampered by the belief that long-distance talks should still be few and brief.

This company has held employee meetings at which were shown two curves, one for capital investment, steadily rising, and the other for revenue, headed down in relation to capital charges.

"So far we are all right," they have been told, "but we must do something to head off future trouble. If each of our employees sells or saves fifty cents a day, it amounts to \$750,000 a year."

## PUBLIC UTILITIES FORTNIGHTLY

Many sales leads have been turned in by employees, and they are correcting mistaken ideas about phone services still being tight. This company has peculiar plant problems, because its system covers a large territory, where it has been called upon to provide service in new subdivisions and factory areas, bypassing acreage property being held for future development. This makes for a heavy investment load. Employees have been shown such conditions, and responded to the need for an active selling spirit throughout the system.

They have effected many savings in costs, such as standardizing the two different-size panes of glass needed for outdoor booths; eliminating spare tires on service cars operating in town, where a garage can be called for a tire change; segregating subscriber cards that seldom call for repair service, so as to save clerical work.

BELL and non-Bell began getting a good supply of phones last year, and decided to team up to push three kinds of revenue-producing service: extensions, toll traffic, and yellow book advertising. Bell's national advertising creates business for the independents as well as Bell companies—in such services the two systems are inextricably interlinked, as the telephone service of the United States.

The independents have launched a national advertising campaign of their own, with a different objective, to be recognized as an important American industry. It has been dubbed a "ghost" industry, because Bell dominates in the public mind. This is a handicap in raising investment capital for independent companies and the manufacturers supplying their equipment.

The manufacturer of non-Bell equip-

ment goes to the investment banker for money, and must prove that his business is stable. If he had Bell as a customer, there would be no doubt about it. But independents are thought of as a lot of small, second-rank companies. The facts about the industry, with its 5,300 companies, 11,000 exchanges, and nearly 9,000,000 telephones, are convincing.

Limited national advertising was started last year in a few publications—principally a spread in *Time*, and advertising in business journals. This was done on a voluntary basis, and proved so beneficial that members of the United States Independent Telephone Association are now paying assessments based on the number of their stations; other institutional advertising is being done by the International Telephone & Telegraph Corporation, and by equipment manufacturers.

THE facts about the independents are almost in the nature of news, and they have been called "A living testimonial to the achievements possible under a system of free enterprise, in a free economy." Both in this advertising for the industry, and for revenue-increasing, local independents do their own advertising, using mats and printed matter supplied by associations. This new merchandising spirit is going to create happier public relations as well as new revenue.

For fifteen years, since the first defense program of World War II, the telephone business has been thought of as one of shortages, backlogs, spiraling costs, enormous appetite for fresh capital, and continual pleas for higher rates.

Now, at last, it has goods to sell, and will steadily have more.

# Good Partners in Mexican Utilities

## PART II.

*In his first instalment, the author describes the financial and regulatory setup in Mexico for public utilities financed with foreign capital. In this part, he describes the Monterrey Railway, Light & Power Company. The author also comments upon the problems of "Impulsora" (owned by American & Foreign Power Company), operating 17 Mexican companies serving 315 communities. He further notes the rate-fixing problems of the Monterrey Company and other foreign-financed utility operations, including tramways, waterworks, telephones, and gives us some conclusions and comment by responsible officials, of both the United States and Mexico.*

By HERBERT M. BRATTER\*

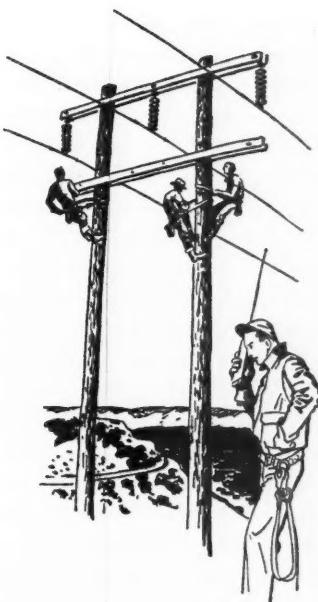
### *Experience and Views of "Impulsora"*

THE Cia. Impulsora de Empresas Electricas, S. A., is owned by the American & Foreign Power Company, Inc. Impulsora operates 17 companies in Mexico, serving 330,000 customers in 315 communities whose 2,686,000 inhabitants comprise 24 per cent of Mexico's population having electric service. On this \$76,000,000 American investment the major subsidiaries have been able to pay no dividends since 1930, while dividends re-

ceived from the others since 1939 to November, 1954, total only \$353,000. Like the other Mexican utilities described herein, Impulsora has been hard hit by the depreciation of the peso. Unlike Mexlight, Impulsora received no interim rate increase to compensate for increased costs; but in recent weeks has been in negotiation with the Mexican authorities on its whole problem. Out of this may emerge not only better rate treatment and financial changes, but eventually Eximbank and World Bank lending.

During 1945-50, reportedly on the gov-

\*Free-lance writer, resident in Washington, D. C.



## PUBLIC UTILITIES FORTNIGHTLY

ernment's promise of a rate increase, Impulsora invested the equivalent of \$14,000,000 in new facilities, almost \$7,000,000 of which were new dollars advanced by Foreign Power in New York. Adequate definitive rates failing to materialize, the Tariff Commission continued to use for valuation purposes the unadjusted peso rate, despite the substantial devaluation of the peso in 1948-49. Earnings dropped approximately 60 per cent. Under these circumstances the investment program could not be continued. Even so, no basic rate increase was forthcoming. The impasse between Impulsora and the government continued well into 1954, when still another sizable devaluation of the peso added to the problem. Throughout the government has insisted on no rate increase without substantial new investment and the company has firmly refused to make any further new investment without a satisfactory settlement of the problem of rates and returns. Instead of a rate increase such as Mexlight got in 1954, Impulsora is concentrating in its present negotiations on seeking a complete solution to all the problems.

**A**SKED for comment on the significance of the 21.2 per cent rate increase obtained by Mexlight in 1954, a spokesman for Impulsora guardedly observed:

If similar increases are granted to other privately owned utilities and if the report of the official committee now studying the whole problem calls for equitable treatment which is then implemented by appropriate legislation, the Mexlight increase may mark a turning point in Mexico's treatment of private utilities. Once American & Foreign Power is convinced that the rate struc-

ture will assure a sound return on any money invested in Mexico, it will certainly try to secure additional capital for investment.

Concerning the World Bank and Eximbank as sources for such capital, Impulsora's spokesman noted that in 1947 talks with the Eximbank were initiated, but consideration of the loan application was shortly thereafter suspended pending such time as the companies should be granted rates adequate for the servicing of a loan. Should the company's present negotiations with the government result in an agreement as to acceptable rates, simplification and reorganization of the operating company setups, as well as an understanding on a new construction program, it is reasonable to assume that an application will be made to the Eximbank or the World Bank for a dollar loan to cover nonpeso costs.

**M**INOR rate increases which its operating companies have received in the past year or two, have failed to result in a net increase in the return on Impulsora's investments, since they have been intended only to compensate for increased fuel, labor, and purchased-power costs. Throwing light on the rate-making process, the company's spokesman explained:

To get a rate increase for increased costs of fuel, labor, and power purchases, Article 143 of the Electric Law calls for studies so involved and detailed that it requires practically the same amount of work to prepare an adjustment study as it does to prepare a new definitive rate study. Under the present regulations, it is necessary for the company to show not only that there are

## GOOD PARTNERS IN MEXICAN UTILITIES

changes in the relative cost of labor, fuel, and purchased power but also that these changes in costs result in lowering the return to the company below that which has been approved. It follows that with the exception of the necessity of preparing tariff schedules, the amount of work required for the presentation of an application for such tariff adjustment is essentially the same as that in applying for revised tariffs. Not only must the original information required by the regulations be presented, but also the considerable additional information which the Tariff Commission requests from time to time during the study of the application; and, on publication of the proposed resolution, the company must submit additional proof and data in an attempt to have reinstated the many exclusions from the normal operating expenses which in all cases have been made by the Tariff Commission.

ILLUSTRATIVE of the inadequacy of past rate increases to compensate for higher fuel and like costs is the increase granted to Mexlight in October, 1953. This was supposed to give Mexlight a net return of 8 per cent. It actually yielded closer to 6 per cent, because the Tariff Commission arbitrarily set aside certain expenses as to be borne by the investor rather than the ratepayer. Also, the commission allowed

only 10,000,000 pesos for retirements and replacements as compared with the company's book accrual for 1953 of Can \$2,869,000—the present equivalent of 36,579,750 pesos.

An exception to the above picture appears to be the case of those companies in northern Mexico which buy their power from USA sources under dollar contracts. Following the 1954 devaluation of the peso, an emergency decree bypassed Article 143 and granted those companies provisional adjustments. Those companies have been spared the preparation of long, detailed studies.

### *Impulsora's Recommendations to Government*

IMPULSORA'S operating companies, in their replies to the questionnaire of the official committee studying the electricity problems, joined in a memorandum setting forth the minimum requirements for restoring investor confidence. It recommends that for rate making the utilities' properties be revalued annually on the basis of an especially developed cost-of-construction index. It recommends that rates be adequate to cover debt service and dividends; that when tariffs prove inadequate there be provision for recouping the deficiency; that rate adjustments be made automatically obtainable without consideration of the approved rate of return, although sub-



**Q** "WHEN the national government undertook to regulate utility rates some power companies turned to the courts for an AMPARO to set aside federal government regulation. The government's contention was that the companies were using unrealistic rate bases, while the companies contended that the government's attempt to regulate rates was unconstitutional."

## PUBLIC UTILITIES FORTNIGHTLY

ject to verification by the Tariff Commission; and that definite time limits be set for the deliberation of the rate authorities. The memorandum also seeks greater freedom of financial reorganization and merger; the reconciling of differences between the present law and regulations as to the life of concessions, etc.

### *Fair Rates and Plant Expansion As "Monterrey" Sees Them*

**I**N a memorandum submitted to the government committee studying the electric industry, the Monterrey Railway, Light & Power Company put fair rate treatment ahead of company expenditures for new installations. The following is summarized from the company's memorandum. During 1942-49 the company "made important investments in its electric system"; but since 1950 new investment has been almost entirely eliminated. The modifications of the electric industry law and regulations between 1940 and 1945, including the tables of uniform values for the computing of rates of return, produced in the industry "confidence, encouragement, and tranquility." The changes referred to left the companies "always confident that, if the moment arrived in which the rate base . . . proved unrepresentative of equitable value . . . the authorities would make the necessary adjustments"; i.e., leave the companies with sufficient earnings to undertake necessary new investment.

In this belief the Monterrey Company in 1946 formulated a \$6,000,000 5-year program of investment. But soon came the devaluation of 1948-49, and the company applied to the Tariff Commission for increased rates based on historical dollar cost. It asked for rates adequate to pro-

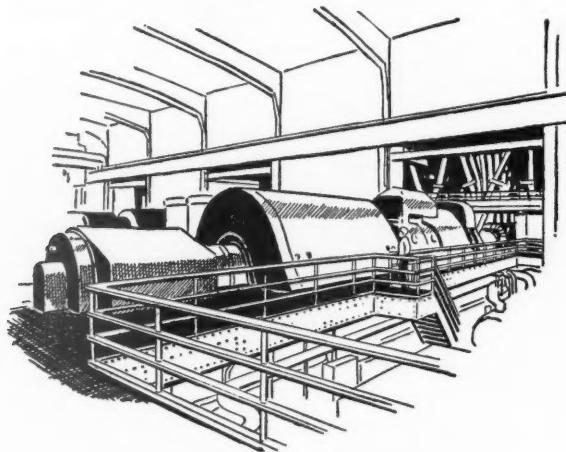
duce returns that would attract the necessary new capital "and that such returns be continuous and not affected by exchange rate fluctuations or other factors beyond the company's control." Prolonged negotiation resulted only in the advice that neither the law nor the regulations contained adequate remedies for the company's complaint; that property values for rate purposes as to installations dating after 1941 had to be calculated in pesos and so were not affected by the decline in the peso's foreign exchange value. In 1951 the company accordingly was granted a definitive scale of rates calculated to yield it a peso return of 9 per cent before taxes.

**T**HAT governmental decision led to the present virtual impasse in the relations between the company and the government. The company terms the government's viewpoint unrealistic and inequitable. "The state of depression of the electric industry in Mexico," it says, "and its inability adequately . . . to supply the services required by the public with ever-increasing urgency are the direct and unavoidable consequence of this discouraging attitude." If Mexico's electric industry is to continue in private hands the adoption and maintenance of new standards for its regulation such as to stimulate investment is indispensable, the Monterrey utility maintains, whereas actual rate policies constitute "a serious impediment and an evident absurdity."

The Monterrey Company contends that, from the standpoint of the investor who has put dollars into Mexican utilities, the chief cause of trouble has been the repeated depreciation of the foreign exchange value of the peso uncompensated

## GOOD PARTNERS IN MEXICAN UTILITIES

---



### New Financing for Mexico

ON January 3, 1955, Mexlight announced completion in December of a one-year 4 per cent \$3,000,000 loan from a group of commercial banks enabling it to buy back from the Mexican government an equal block of the company's bonds, thereby effecting an interest saving of 2 per cent. Participating in the deal were the Chase National Bank, \$1,000,000; Canadian Bank of Commerce, \$1,000,000; First National Bank of New York, \$500,000; and Credit Suisse of Zurich, \$500,000. With the proceeds the company bought back from Nacional Financiera \$3,000,000 of its series C first mortgage bonds at par "against a repurchase agreement at the same price a year later." The deal is reported to be extendible.

Chairman William H. Draper, Jr., announced that the loan was the first step toward a financing program in which private banks and the security markets in Mexico and other countries would supplement governmental sources of credit to finance the utility's further expansion. Mexlight paid a 25-cent dividend on its common shares December 15, 1954, the first in four decades.

by equivalent increases in the peso revenues of the companies. In the light of the rate base allowed by the government the Monterrey Company calculates that its actual investments through 1950, totaling \$6,157,431, because of the peso's devaluation, had been reduced by 1954 to the

equivalent of only \$2,536,183, an evaporation of 58.8 per cent of the investment. For this reason the company has completely discontinued new investment.

"MONTERREY" also contends that the Mexican corporation income tax,

## PUBLIC UTILITIES FORTNIGHTLY

since it is not counted by the rate-making authorities as a legitimate cost of operation, constitutes a heavy burden on the companies. It argues that this places the electric industry in an unfair position *vis-à-vis* other industries in Mexico. Holding that private capital, fairly treated, is capable of supplying Monterrey—and presumably other parts of Mexico—with necessary electric installations, the Monterrey Railway, Light & Power Company recommends:

- (1) A permanent commission to continually study the industry and publish annually a revised set of "tables of uniform values" for rate making; and
- (2) A separate commission to compile annual indexes of the costs of electrical installations so that the values of electric utility properties may be kept up to date.
- (3) Allowance of the income tax as a cost of operation.

Also the company adds a word for better treatment of the gas industry, although that industry does not come within the scope of the official committee addressed in the above-cited company memorandum.

PRIOR to 1932 some electric utilities in Mexico fixed their own tariffs without government intervention. During the depression the public complained at the "high" rates and mass meetings of protest were held in several cities. The problem was intensified by the fact that the American & Foreign Power Company had come into Mexico during the booming 1920's when it had to pay what later appeared to be high prices for the properties it bought and was accordingly under the necessity

of charging the public rates high enough to support the investment.

When the national government undertook to regulate utility rates some power companies turned to the courts for an *amparo* to set aside federal government regulation. The government's contention was that the companies were using unrealistic rate bases, while the companies contended that the government's attempt to regulate rates was unconstitutional. Later in the 1930's the Constitution was amended making federal regulation possible and for Congress to enact provisions for regulating the electric light and power companies. The law of December 31, 1938, covered all the aspects of regulation. It contained the basic principle of reasonable return on the investment and provided for amortization of the properties and their surrender to the government upon expiration of their concessions.

IN 1941 the law was changed. Since the companies and the government had been unable to agree on the correct valuation of the properties for the purpose of rate making, the new law set up a series of tables of uniform values. All similar types of generating and distributing equipment were given a valuation as of 1941. This step was intended to cut the Gordian knot.

Also in 1941 the government created the Comision de Tarifas (Tariff Commission) to regulate the rates. The commission as set up in 1941 was merely a consultative body. Policy decisions were made in the Ministry of Economy.

The Comision de Tarifas studied the situation in such cities as Puebla and, as described by one of its employees of the period, "started changing the old prejudices." According to the same source the

## GOOD PARTNERS IN MEXICAN UTILITIES

real work began in 1945, when the commission became the Comision de Tarifas de Electricidad. After protracted studies the commission fixed provisional rates for a number of companies. For some years, starting with 1945, 8-9 per cent was regarded by the government as a fair return, with the rate base calculated from the tables of uniform values. This percentage, as pointed out elsewhere in this article, is recognized as too low under today's conditions but is raised only under certain conditions, after careful consideration of each company's case.

Only since 1949, when the Tariff Commission (now called Comision de Tarifas de Electricidad y Gas) was taken out of the Ministry of Economy and made autonomous, has that body been more effective. In that year it promulgated a rate system under which rates to a single user fluctuate as the quantity of power used increases. Up to a certain point the rate charged declines as additional power is used; but beyond such point the rate goes up on the grounds that the company has to have additional equipment to supply the added power. This recycling type of rate applies to only residential and small commercial users.

### *What Happened to Canadian Investments In Monterrey Trams and Waterworks*

THE Compania de Tranvias, Luz y Fuerza Motriz de Monterrey, a subsidiary of the Monterrey Railway, Light

& Power Company of Montreal, was created nearly half a century ago to provide the city of Monterrey with electric light and power, manufactured gas, tramway, and water services. Over the decades the experience of the investor in these ventures may be described as a financial nightmare. The tramway service, for example, was discontinued in 1932 after the company had been operating that department at heavy out-of-pocket expense for several years and after having unsuccessfully tried to obtain from the regulatory authorities relief in the form of increased streetcar fares.

To be permitted to shut down this department the company had to agree to give the municipal government 50,000 square meters of land for public use; pay the government \$28,000 and provide the donated land with gas, water, and sewage installations free of charge; and pay the employees \$20,000 in severance pay.

THE history of the investment in the water service goes back to 1906, when the company under a concession granted by the government of the state of Nuevo Leon invested \$4,000,000 in building a water supply and sewage disposal system, including distribution lines for both. The concession provided that the company be guaranteed by the government a gross annual income equal to 10 per cent of the total investment in gold. Any deficit from the guaranteed percentage return was to



**G**"If Mexico's electric industry is to continue in private hands the adoption and maintenance of new standards for its regulation such as to stimulate investment is indispensable, the Monterrey utility maintains, whereas actual rate policies constitute 'a serious impediment and an evident absurdity.'"

## PUBLIC UTILITIES FORTNIGHTLY

be made up by the government; but the latter, as a *quid pro quo*, was to receive half of anything earned in excess of the 10 per cent in any year. For the government's protection in this respect, it was provided that an "intervening office" would collect the payments from the customers and turn over to the company whatever was its due.

THE revolutions and disturbances of 1910, 1917, 1924, and 1927 made it impossible to build the gross revenues to the 10 per cent figure; hence a tremendous claim was piled up against the government for the difference between the actual peso receipts and the guaranteed 10 per cent gold figure. The resultant controversy was aggravated by the effects of the depression of the 1930's and continued unsettled until 1944. At that time the government claimed that, since the gross peso receipts were in excess of 10 per cent of the original peso (not gold) investment, the company was obliged to turn over to the government half of the excess. To enforce its contention, the government ceased turning over to the company the receipts collected by the "intervening office," with the exception of 30,000 pesos a day to meet operating expenses.

Although the company filed an injunction suit against the government, the Supreme Court of Mexico ultimately decided that the government was acting in its rôle as the company's partner rather than as a "constituted authority" and consequently denied the company's petition. Thus the company was forced to sell out to the state government, from which it obtained \$1,700,000, or—as the investors view it—\$2,300,000 less than had been put into the waterworks in 1906 in gold dollars of a

much higher buying power than the dollars received for the works from the government. Once the waterworks were legally in the government's hands, a 25 per cent water tax was levied on all consumers.

### *Mexican Telephones*

A MONTERREY businessman called my attention to the fact that the phone company about a year earlier had installed automatic service on the promise of a rate increase that was still just a promise. As a result of the company's expenditure of 15,000,000 pesos, residential customers in that city were using the most modern equipment for unlimited service at a monthly cost of only 15 pesos, equivalent today to \$1.20.

With the merger of its two predecessor companies in 1950 there since has been only one major phone company in Mexico, Teléfonos de México, S. A. Approximately seven other and much smaller companies operate in the country. Of the 330,500 telephones served by Teléfonos de México, about 74 per cent have automatic service. About 150,000 applications for new service are on file. Lack of capital prevents the company from promptly attending to these applications. While attempts to raise some capital locally have met with moderate success, the chief deterrent to additional private investment in the company is the low rate structure and the uncertainty as to adequate rate treatment by the government in the indefinite future.

G. Hugo Beckman, managing director of Teléfonos de México, during an interview observed that the company's rates are believed to be the lowest in the world. In Mexico City, for unlimited service the residential rate is 15 pesos (\$1.20) a month,

## GOOD PARTNERS IN MEXICAN UTILITIES



### Real versus Estimated Return

**I**LLUSTRATIVE of the inadequacy of past rate increases to compensate for higher fuel and like costs is the increase granted to Mexlight in October, 1953. This was supposed to give Mexlight a net return of 8 per cent. It actually yielded closer to 6 per cent, because the Tariff Commission arbitrarily set aside certain expenses as to be borne by the investor rather than the ratepayer."

and the commercial only 30 pesos (\$2.40). It is small wonder that the lines are overloaded and the service at times very poor. During certain hours of peak traffic it is virtually impossible for subscribers in certain areas of the capital to get a connection. Most businesses, therefore, have more than one phone, but this only adds to the company's burdens.

**I**N seeking investors for its shares and bonds in Mexico, Teléfonos de México calls attention to the 10 per cent dividend it has been paying since 1950. But foreign investors know that this is based on the peso valuation of the company's assets, unadjusted for the effects of peso devaluation.

Teléfonos de México is capitalized at 250,000,000 pesos. The chief stockholders are L. M. Ericsson of Stockholm and IT&T of New York. About 10 per cent of the stock is owned by approximately 10,000 residents of Mexico. "Due to lack of capital the company cannot now expand, improve, or develop its activities," Mr. Beckman stated. Discussing the prospect, he continued:

Early this year we applied to the Ministry of Communications for increased rates, and these are expected to be in effect by January, 1955. The residential rate will be increased from 15 to 25 pesos and the commercial rate from 30 to 45 pesos, with allowance of 150 and 300 calls per month, respectively. Each

## PUBLIC UTILITIES FORTNIGHTLY

additional call will cost 15 centavos, equivalent to two cents.

Application for rate increases must be made to the Ministry of Communications. There is no automatic provision to raise rates as costs go up. After application is made, the authorities study the company's financial position. The study may take six months or a year, and its outcome is unpredictable.

The government is contemplating a revaluation of the phone company's plants to allow for the effects of the peso devaluation of April, 1954. Such revaluation should improve our position. We find the Mexican government more understanding of the problems of the public utility companies than formerly was the case and therefore expect that, within two years, the country's phone service will be considerably improved.

**F**URTHER light is thrown on the company's problems by the 1953 annual report of Teléfonos de México. In 1953 the company added 12 per cent to its investment, an increment of more than 68,000,000 pesos. Only part of this could be satisfactorily and definitely financed. Some 48,000,000 pesos were financed by short-term credits from equipment manufacturers, bringing total indebtedness to those concerns to nearly 105,000,000 pesos. Receipts from the tax on phone service enabled the government between April, 1952, and the end of 1953 to turn over to Teléfonos de México some 29,000,000 pesos, all of which had to be applied toward redemption of a 34,000,000 peso loan made to the company in 1951 by Nacional Financiera, the government's investment bank.

Under the necessities of the situation the government, as in the case of the elec-

tric industry, in 1953 proposed to Teléfonos de México a financing plan which would compel phone subscribers to help finance needed expansion. Preferential treatment would be given applicants for new phone services who buy company stock and bonds. In an agreement worked out with the Ministry of Communications over a long period, the company has undertaken to establish 25,000 new stations per year over the next five years, contingent on its selling the necessary stocks and bonds. The government has undertaken to insure the success of the scheme from its end. New subscribers are to be required to buy an equal amount of common stock and bonds on a scale still to be determined. The company's annual report adds:

The federal government assumes the obligation of assuring the company revenues which shall produce a reasonable profit, including the payment of adequate dividends, and stimulate the investment of new funds necessary to continue the improvement and development of the service, and to this end will approve new tariffs at the latest by the end of the current year.

**T**HE government also has undertaken to provide the company long-term loans from the telephone tax proceeds, plus a 20-year 8 per cent loan of 60,000,000 pesos. But—the annual report observes—success will depend on the adequacy of the return to the investors and their confidence that the return will be assured for the future. "There is only one way to guarantee the return necessary to attract new capital and that is an adequate tariff policy on the part of the authorities."

The company's application for in-

## GOOD PARTNERS IN MEXICAN UTILITIES

creased rates has been pending since May, 1953. Its new automatic service in Monterrey has been at work since October, 1953. The amount of the rate increase promised for January, 1955, will provide a clew as to the outlook for the phone companies.

### Conclusion

THE rate increase granted Mexlight in 1954 has received a warm welcome not only from the company concerned, but also from the World Bank, which has a large stake in the company and in Mexico. George S. Messersmith, former U. S. Ambassador to Mexico and now honorary chairman of Mexlight, states that the electricity problem is being attacked more realistically in Mexico than in any other Latin American country. Former U. S. Treasury Secretary John W. Snyder, now a Mexlight director, is definitely optimistic. He states:

I am tremendously pleased with the very apparent indication of more thorough co-operation between the government of Mexico and private capital invested in that country. The very fact that President Ruiz Cortinez, Finance Minister Carrillo Flores, and Minister of Economy Loyo entered so enthusiastically and sincerely in the inauguration ceremonies of the 45,600-kilowatt Mexlight hydroelectric plant at Patla in Oc-

tober was most reassuring. The recent rate increases to meet additional costs of power generation and distribution, which were worked out by Messrs. George Messersmith, William H. Draper, and Gustave Maryssael of Mexlight with the government, have further strengthened my impression that the Mexican government intends to encourage greater use of private funds in industry.

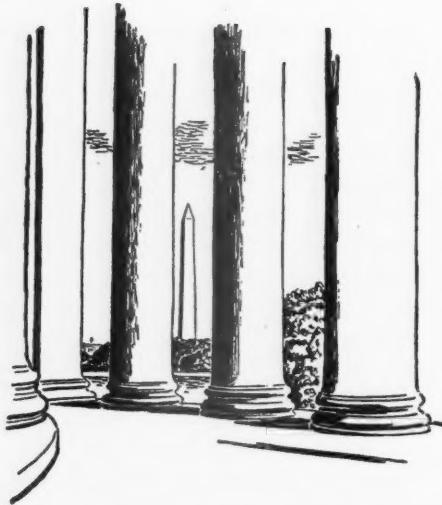
On the other hand, an official of another utility in Mexico terms the government's policies as still unrealistic, with none of the companies, not even Mexlight, receiving an adequate return. Either the government will have to allow the companies a return of 9 per cent of their "real values" after taxes, he states, or it will have to nationalize the industry. A decision in 1955 is necessary. "As it is," that businessman adds, "the three major companies are facing a salvage operation."

IN all this the investor is not the only one who has a stake. The U. S. taxpayer is involved. He is concerned with the prosperity and stability of our southern neighbor and his credit is being increasingly used to finance Eximbank activities and make possible the work of the World Bank. There still is room for vast improvement in Mexico's treatment of utilities.

---

*"I HOPE no one will accuse me of special pleading when I point out that public works must be paid for always out of taxes. These taxes fall as a heavy burden on all those who are employed; and furthermore they act as a powerful depressant upon the entire economy. Thus they tend to diminish the total number of permanent jobs and to delay the creation of new ones. But with private works, it is just the opposite. They do not eat taxes; they pay them—thus lightening the burden on their fellow men."*

—BENJAMIN F. FAIRLESS,  
Chairman of the board, United  
States Steel Corporation.



### *Rift on Producer Controls*

ANY idea that there was a closely knit unity of viewpoint in the gas industry on exempting producers from FPC regulation was pretty well exploded by the gas utility counsel at the recent FPC hearings on proposed rate-making rules. The gas utilities, or some of them, indicated that they were not only in favor of regulating the rights in producers' rates for gas to pipeline companies, but were even in favor of more definite restrictions.

Randall J. LeBoeuf, Jr., counsel for Consolidated Edison Company of New York, Inc., on the second day of the hearings said that producers' rates ought to be kept at existing levels to prevent eastern seaboard natural gas distributing markets from being "completely strangled." He urged the FPC to declare all automatic price clauses in producers' contracts as illegal. The Consolidated Edison lawyer made no distinction between various types of escalator clauses or favored nation clauses for automatic increases. He said that they all contributed to a "wave effect," in which a single raise in the production field triggers off a series of price increases

## Washington and the Utilities

ultimately affecting the gas consumers served by the distributing utilities.

Along the same line, Edwin F. Russell of the Brooklyn Union Gas Company told the FPC that the mere adoption of "contract prices" as reasonable would amount to "no regulation at all."

One interesting suggestion from the viewpoint of the distributing utilities came from J. David Mann, Jr., counsel for the United Gas Improvement Company of Philadelphia. He said that if the FPC would establish a judgment price range (minimum or base price and maximum) for a given area, it would divide the natural gas production regions into a fair and orderly cost pattern. He said that the Texas Railroad Commission has established comparable "area pricing" districts.

Other distributing utility counsel attacked so-called "arm's-length" contracts between producers and pipeline companies as unrealistic and all seem to be very critical of any type of automatic price adjustment by virtue of contract.

### *The Producers' Arguments*

DURING the first day of the FPC hearings (January 11th) counsel for the

## WASHINGTON AND THE UTILITIES

producers hit hard at orthodox rate regulation as a vehicle for extending the FPC's control by way of carrying out the mandate in the Phillips Petroleum decision. It was the attorney for the Phillips Petroleum Company, Rayburn L. Foster, who declared that neither the Supreme Court nor Congress has authorized or instructed the FPC to *reduce* prices. He warned that any such reduction in the production level simply for the sake of a rate reduction at other regulatory levels would hinder exploration for needed new reserves and result in less gas being available for interstate commerce. He said that only where there is a clear showing, based on persuasive evidence that producers' prices are unjust and unreasonable can there be any justification for price cuts by the FPC.

Both Foster and David Searles, attorney for the American Petroleum Institute and eight other oil and gas groups, urged the adoption of the arm's-length "contract price" as the proper and fair way of extending FPC jurisdiction over the producers.

The producers' attorneys generally contended that sales prices resulting from contract bargaining are truly competitive and that the conventional rate base approach for fixing such prices is inappropriate and unsuitable. Searles urged the adoption of the contract price as a fair showing of producers' rates by the FPC, providing the commission is satisfied competitive conditions have been met.

THE producers' attorneys encountered some challenging comment from the commissioners. Chairman Kuykendall pointed out that FPC regulation of producers' prices must be based on sound economics, as well as comply with formal requirements of the law. Commissioner Draper indicated that the producers' counsel might be falling into the temptation of

rearguing the merits of the court's decision in the Phillips Case.

Judging by the expressed views of some of the commissioners, there have been indications that the FPC leans toward the so-called "fair field price" as an initial approach to regulation of rates charged by independent producers. While spokesmen for the producers admitted that this method would be preferable to either original cost or reproduction cost rate base methods, they complained that the weighted average upon which the fair field price is based is far below the current average or "going price" in intrastate commerce.

The position of a group of Middle Atlantic consumer states (Virginia, West Virginia, Maryland, and the District of Columbia) also reflected some reservation if not uncertainty over the problem. The argument of Jerome M. Alper of the Washington bar, the joint counsel representing these state commissions, stressed the immensity of FPC's difficulties that would be involved if the commission should adopt either the orthodox regulatory formulas or attempt short cuts via the "field price" approach. The joint counsel came to no specific conclusion with respect to any of them.

Instead, the FPC was urged to launch an exhaustive study of the problem to develop more facts before determining any set policy.

### *Legislative Strategy Planned*

SEVERAL Congressmen from the gas-producing states, notably Representative Harris (Democrat, Arkansas) and Representative Ikard (Democrat, Texas), made early announcement of their willingness to introduce legislation to amend the Natural Gas Act so as to exempt producers from the FPC's jurisdiction. This, in effect, would nullify the Supreme Court's decision in the Phillips Case. But the

## PUBLIC UTILITIES FORTNIGHTLY

strategy of the advocates of such legislation seems to be trending towards more "neutral" sponsorship—preferably some Senator or Congressman from a so-called "consumer" state.

The immediate outlook is for early progress to be made in the House where Representative Priest (Democrat, Tennessee) is chairman of the House Interstate Commerce Committee. This is the committee which would handle the legislation. Chairman Priest had a bill of his own on this subject, similar to the old Kerr Bill which passed Congress in 1950 and was vetoed by former President Truman.

Chairman Priest says he has not changed his position of opposition to FPC regulation of the gas producers and gatherers. Priest plans to have full committee hearings so as to speed up the legislative process, which might otherwise be delayed if it followed the usual channels of subcommittee hearings. "As controversial as this bill is," Priest said, "I would be inclined to think that the full committee will want to hear the testimony instead of leaving it up to a subcommittee."

Over in the Senate, such a measure faces a less sympathetic Interstate Commerce Committee, headed by Senator Magnuson (Democrat, Washington), who has committed himself in the past to opposition to the proposed amendment.

**G**AS producers, meanwhile, have launched a nation-wide campaign to gain wide support for legislation in the present Congress to get around the Phillips Petroleum decision. The industry's "educational" story will be directed particularly toward consumers in an effort to convince them that an assured future supply of natural gas can be guaranteed only by competitive, unregulated production. The

industry is prepared to spend \$1,500,000. It is headed by L. F. McCollum, president of Continental Oil Company, who is doubtful about chances for such legislation this year.

### *The Dixon-Yates Fight*

DEMOCRATIC foes of the Dixon-Yates contract to have private utility interests build a power plant to supply TVA from West Memphis, Arkansas, are doping out strategy. They had only until February 15th to put pressure on the AEC to withdraw from the contract without paying a penalty. Representative Holifield (Democrat, California) indicated that there would be a joint resolution, avoiding the necessity for the President's signature to revoke the contract. But it is doubtful if this would even command a majority in both houses.

Chairman Anderson (Democrat, New Mexico) has hinted that his congressional Joint Atomic Energy Committee would get an investigation under way not only of the Dixon-Yates contract but two previous AEC contracts directly with private utility interests for power plant supply. There were also heard reports of a much more debatable move to have the Joint Committee rescind the waiver of a 30-day review of the contract which was adopted by the committee of the 83rd Congress last fall.

Foes of the contract are not in entire harmony as to the basis for their criticism, however. It was disclosed that there were two minority reports stemming from the old Joint Committee's action—some of the Democratic members being unwilling to go along with the more radical criticism (much more voluminously expressed) in a 100-page dissent sponsored by Representative Holifield. (See, also, page 161.)

# Wire and Wireless Communication



## *FCC to Consider Rules for Private Microwave Systems*

THE FCC will probably start hearings in the near future on proposed rules for the use of microwave frequencies for communications services. Actually, there are three separate proceedings pending concerning this problem. One involves the state of California, which has petitioned the commission for authority to use certain frequencies for the operation of its statewide interagency communications services without restriction. At present, frequencies assigned to state agencies, such as the police department, may be used only for the business of the agency. California would like to combine all frequencies and use them for any of the state's business. So far, the FCC has not scheduled hearings on California's petition. Telephone companies, fearful that indiscriminate use by the state of radio frequencies might lead to the eventual establishment of a state-run telephone system, intervened in opposition.

Two other pending matters before the FCC involve use of intrasystem communications service by private industries, on the one hand, and on the other, by the common carriers themselves. The commission has been collecting information on the use of such systems from both private

industries and telephone companies for the last year. Up to now, use of intrasystem communications systems has been in the developmental stage, operating on temporary rules. The next steps before the FCC are designed to establish permanent rules.

The telephone company rules will probably have to await FCC action on the "non-common carriers." Last December, the central committee on radio facilities of the American Petroleum Institute, in co-operation with other groups representing present users of private microwave systems, submitted its analysis of the problem to the FCC.

The API's committee report indicates that the growth of private microwave systems has by no means reached a saturation point. It predicts that their usage will at least double within the next five years. The FCC was urged to establish rules concerning engineering standards promptly, in accordance with the views of private users obtained by means of a questionnaire circulated by the API. Replies to the questionnaire indicated universal agreement among users that FCC licenses should (1) specify the radio frequency, but (2) not require any listing as to the use to be made of portions of the band width. There was also general agreement that the band

## PUBLIC UTILITIES FORTNIGHTLY

width authorized should be the full band width to be used in the beginning. Users feel that the selection of the band should be on the basis of the band width required rather than on whether the system is a short-haul or long-haul system. The report noted, in addition, that very considerable expansion of the usage of remote control, for long-distance metering and other purposes, facsimile transmission, and industrial TV is contemplated by present users.

### *Western Union Introduces Ticketfax*

A NEW type of electronic facsimile system, called Ticketfax, which will speed up and help revolutionize railroad reservation and ticket-selling service, is now being installed by Western Union Telegraph Company. The Ticketfax flashes Pullman and reserved seat coach tickets from one railroad station to another and provides them almost instantaneously to customers at the ticket counter. First installations of the system are being made in a modern ticket and reservation office to be opened shortly by the Pennsylvania Railroad in Philadelphia and in the modern office opened recently by the New York Central Railroad in Cleveland.

The new facsimile system, which delivers a ticket in eight seconds, will speed up ticket sales not only at railroad central bureaus, but also, through fast transmission, at other stations, ticket offices, and large companies in their areas. Use of the Ticketfax will permit travelers who walk into the center of the city or outlying railroad ticket offices and ask for reservations to be quickly handed facsimile duplicates of tickets for their use on trains, while the originals are miles away at the main office. Mechanization of ticket deliveries at the central bureaus will also enable the pub-

lic there to obtain reservations with speed, ease, and convenience.

To send a ticket a railroad employee in the central bureau merely places it on a machine. The transmitter automatically wraps the ticket around a transparent 4-inch drum which revolves 1,800 times a minute, or five times as fast as standard facsimile equipment. An electric eye scans the ticket as it revolves and sends impulses over the wire. At the counter of the main ticket office or at a distant station, a revolving drum moves laterally past a stylus which conveys the arriving impulses to electro-sensitive recording paper. Seconds later the ticket is ejected by the machine and is handed to the passenger.

To meet demands for such a system, Western Union engineers made it one of the fastest developments in the country's history. Less than one year ago, the machine was only an idea. All research, development, building of models, testing, preparation of drawings and specifications, manufacturing, and now commercial use, were packed into one year.

Ticketfax is Western Union's newest type of leased private wire system. This latest Western Union development is a "son" of Western Union's Intrafax, with which companies in many industries are eliminating communications bottlenecks in their internal correspondence. By speeding messages and forms of all kinds between buildings, departments, and branches of large companies, Intrafax has become a valuable new tool, speeding and making more efficient the operations of many organizations.

### *FCC Chairman Calls for Minimum Regulation*

AMERICA's communications agencies are policing themselves so well that they

## WIRE AND WIRELESS COMMUNICATION

deserve—and require—only a minimum amount of governmental regulation in the opinion of the new chairman of the Federal Communications Commission. George C. McConnaughey, named by President Eisenhower to the FCC chairmanship last September, delivered his theory on government controls in a recent address before the Southern California Broadcasters Association.

**I** FAVOR as few government controls as possible, consistent with the public interest," McConnaughey said. "I believe in a minimum amount of regulation. Within the bounds of public interest, competitive free enterprise is what we should have in this country. I have confidence in the communications industry, in radio, and in television.

"The industry has made great strides in carrying out its great responsibilities for public service. Regulations should come into the picture only when industry does not perform its job."

In an earlier interview, McConnaughey expressed the belief that the television field is not filled by a long way. "There are still a lot of places where the people ought to have TV service," the FCC chairman said, "and there still are a lot of vacancies for educational TV. The commission is holding these in reserve, for it feels growth in the educational field will be quite slow because of high costs."

The commission plans to start hearings soon on rules for so-called subscription television, McConnaughey revealed. A proposal now before the FCC would authorize the sending out on an exclusive or closed circuit basis television programs which subscribers would pay for on a monthly or some other periodical basis. Those television fans, willing to pay for superior TV presentations, could do so without the interruption of commercial advertising.

**T**HE reaction of the motion picture industry to this proposal promises a lively hearing when the matter comes before the commission. Representative Hinshaw, Republican of California, has already introduced a bill in the new Congress which would amend the Federal Communications Act so that any television broadcasting on a paid subscription basis would have to be regulated as a "common carrier" just like telephone and telegraph companies. Most of the country's motion picture theater owners have banded together to oppose subscription TV when the hearings begin. Calling themselves the "joint committee on toll-TV," the group denies contentions by the Zenith Radio Corporation and others in favor of subscription TV that commercial TV is not now "free" because the public pays for what it sees advertised on the screen.

The "obvious answer" to this, say the theater owners, is that the public is not required to buy advertised products. Furthermore, "commercial television as we know it today is as free as a public park where popcorn is sold; the patron may visit the park free of charge without buying the popcorn unless he wants to. The theater owners argue that many TV set owners, who have bought their sets on the instalment plan with the understanding they will not have to pay anything for programs, would raise a "hue and cry" if the FCC permitted programming on a subscription basis.

The joint movie committee, whose members own about 75 per cent of the nation's 16,000 motion picture theaters, is made up of Allied State Associations, Theater Owners of America, Texas Drive-in Theater Owners of Texas, Southern California Theater Owners Association, Kentucky Association of Theater Owners, Independent Theater Owners Association of New York, and Metropolitan Theater Owners Association.



## *Consolidated Edison Plans Full-scale Atomic Power Plant*

**A**DMIRAL Lewis L. Strauss, chairman of the Atomic Energy Commission, recently requested proposals from private companies by April 1st for constructing atomic power reactors. Companies submitting acceptable proposals will qualify for federal co-operation and assistance "within the limits of available funds." This was the commission's first public announcement of plans to implement the Atomic Energy Act of 1954. In studying the proposals, the chairman said the commission would employ five basic criteria:

1. The probable contribution of the proposed project toward the eventual achievement of economically competitive power.
2. The cost to the commission.
3. The risk to be assumed by the private interest.
4. The competence and responsibility of the private interest.
5. The assurance given by the private company against abandonment of the project.

According to Dow-Jones, the AEC has now promised private atomic power producers a 7-year guaranteed price for the plutonium which would be turned out as a by-product. If the price is high enough,

## Financial News and Comment

By OWEN ELY

this would greatly facilitate building of new plants, particularly in areas like New England where fuel costs are high. The AEC would also sell or lease uranium, thorium, and heavy water to the utilities, or lease processed uranium and plutonium, at "fixed" prices (subject only to change with the general price level). These steps are necessary to enable the utilities to estimate the cost of producing atomic power.

**A**NOTHER promised advantage is the loan (free of charge) of enriched uranium which may be tied up in the power plants, with the utility paying the AEC only for uranium actually used up. The AEC would also continue to give the utilities the benefit, without charge, of certain types of research and development work, while on the other hand it would agree to pay the private companies for any technical and economic data resulting from

DEPARTMENT INDEX	Page
Consolidated Edison Plans	
Full-scale Atomic Power Plant .....	150
\$4 Billion Utility Financing in 1954 .....	152
Table—Recent Utility Analyses .....	152
Public Financing for Public Power .....	153
A Valuable Utility Chart Book .....	153
Table—1953-54 Utility Financing .....	154
Table—Electric Utility Statistics .....	156
Tables—Financial Data on Gas, Telephone, Transit, and Water Stocks .....	157, 158

## FINANCIAL NEWS AND COMMENT

the project. All these advantages would, of course, be incorporated in contracts, after proposals have been submitted.

However, a minor controversy has now arisen as to whether the schedule of prices which has been set by the AEC on various nuclear materials should merely be given confidentially to selected and "properly cleared" utility executives or whether it should be disseminated more widely. Senator Anderson, prospective head of the Joint Congressional Atomic Energy Committee, thinks the prices should be made public, presumably so that all the utilities would have ready access to the information instead of merely a small group. Such a release would seem almost essential if the April 1st deadline for proposals set by Admiral Strauss is maintained, since formal "clearance" of numerous utility officials by the FBI or some other agency might take considerable time and might also dampen the enthusiasm of some utilities to make proposals.

PRIOR to the passage of the Atomic Energy Act, Duquesne Light had arranged to construct a 60,000-kilowatt plant with the financial aid of the AEC and the engineering know-how of Westinghouse Electric. A number of other utilities also joined research teams with industrial companies such as Dow Chemical, Monsanto Chemical, Bechtel Corporation, etc. (as formerly described in this department), but as yet no very definite construction projects have resulted from these studies. In New England, however, a group of utilities several months ago formed the "Yankee Atomic Electric Company" to construct a moderate-sized atomic plant. (Monsanto Chemical, which was formerly teamed with Union Electric of Missouri in a study project, is now reported aiding the Yankee plans.) Recently, American Locomotive Co. was selected

from 18 competitors to build an experimental 2,000-kilowatt "package" nuclear power unit which can be disassembled and flown to remote military bases.

A FEW days before Admiral Strauss' statement, Consolidated Edison Company of New York had announced that it was planning to construct a full-scale atomic power plant on a commercial basis; *i.e.*, without financial assistance from the commission. For this purpose it has enlisted the services of General Electric and Westinghouse Electric, and Vitro Corporation of America has also been engaged as a consultant. Substantial acreage on the Hudson river, near Peekskill, was recently acquired as the site of a future generating plant, and its suitability for location of the atomic plant is being studied. Consolidated Edison has not yet asked the AEC for a license under the 1954 act.

One of the major problems to the utility companies, the importance of which has not been fully realized until recently, is the desirability of obtaining specialized insurance for atomic power plants. A reactor explosion, while doubtless an extremely remote possibility, in view of the many safety devices developed by the AEC, would raise additional problems of extensive damage suits, plus the job of "decontaminating" structures within the vicinity of the explosion. The recent address by George L. Weil (formerly connected with the AEC) before the Atomic Industry Forum regarding the potential effects of such an incident stressed the complications along this line.

In this connection it is interesting to note that the preliminary prospectus of Duquesne Light Company, in connection with the current offering of its preferred and common stocks, states on page 9 under the heading Nuclear Power Plant, that "In both the contract and the lease, the

## PUBLIC UTILITIES FORTNIGHTLY

government indemnifies the company against loss, damage, or liability, not compensated by insurance or otherwise, arising out of the hazardous properties of source, special nuclear or radio-active materials."

### *\$4 Billion Utility Financing In 1954*

**T**OTAL utility financing in 1954 (see table on page 154 compiled by Ebasco

Services Incorporated) totaled \$4.1 billion compared with \$4.3 billion in 1953. Total financing by electric utilities ran slightly lower than in the previous year, and that of gas utilities a little higher, while telephone financing declined about one-quarter. Breaking down the total amount by purpose of financing, it appears that refunding operations accounted for over one-quarter of the total financing as compared with a negligible amount in 1953. "Divestments" remained around the



### UTILITY ANALYSES\*

#### *Company Analyses*

	<i>Firm</i>	<i>No.</i>	<i>Pages</i>	<i>Issued</i>
Arkansas Louisiana Gas .....	Hirsch & Co. ....	2		Nov.
Berkshire Gas .....	J. G. White & Company .....	3		Dec.
Central Ill. Pub. Ser. ....	L. F. Rothschild & Co. ....	2		Nov.
Central & South West .....	Josephthal & Co. ....	2		Sept.
Citizens Utilities Co. ....	Kerr & Co. ....	4		Dec.
Commonwealth Edison .....	Reynolds & Co. ....	1		Dec.
Commonwealth Edison .....	Goodbody & Co. ....	2		Dec.
General Public Util. ....	Josephthal & Co. ....	4		Nov.
Middle South Utilities .....	Franklin Cole & Co. ....	6		Nov.
New England Elec. System .....	Argus Research Corp. ....	2		Nov.
New England Elec. System .....	Josephthal & Co. ....	4		Dec.
Niagara Mohawk Power .....	Argus Research Corp. ....	2		Jan.
Northern Illinois Gas .....	Goodbody & Co. ....	2		Oct.
Northern Natural Gas .....	Halle & Stieglitz .....	2		Dec.
Ohio Edison .....	Josephthal & Co. ....	2		Oct.
Panhandle Eastern Pipe Line .....	Halle & Stieglitz .....	4		Nov.
Pennsylvania P. & L. ....	Orvis Brothers & Co. ....	3		Dec.
San Diego Gas & Electric .....	Goodbody & Co. ....	3		Nov.
San Diego Gas & Electric .....	L. F. Rothschild & Co. ....	1		Nov.
South Carolina E. & G. ....	L. F. Rothschild & Co. ....	1		Nov.
Southern Company .....	Argus Research Corp. ....	4		Nov.
Southern Company .....	Josephthal & Co. ....	1		Nov.
Southwestern Public Ser. ....	Argus Research Corp. ....	2		Dec.
Suburban Propane Gas .....	G. A. Saxton & Co., Inc. ....	5		Dec.
Texas Gas Transmission .....	Argus Research Corp. ....	..		Dec.
West Penn Electric .....	Argus Research Corp. ....	2		Nov.
Wisconsin Power & Light .....	Kerr & Co. ....	4		Jan.

#### *Regular Bulletins and Tabulations*

Electric and Gas Stocks .....	First Boston Corporation .....	11	Dec.
Utility Company Common Stocks .....	White, Weld & Co. ....	6	Dec.
Monthly Review of Utility Developments .....	Josephthal & Co. ....	2	Jan.
Public Utilities Bulletin .....	Eastman, Dillon & Co. ....	10	Jan.

#### *Other Bulletins on General Topics*

Public Utility Common Stocks .....	R. W. Pressprich & Co. ....	6	Nov.
Dynamic Growth Prospects of Electric Utility Industry .....	Goodbody & Co. ....	11	Nov.
Electric Utility Industry .....	Clark, Dodge & Co. ....	5	Nov.
Electric Utility Company Common Stocks .....	Smith, Barney & Co. ....	6	Jan.
Four California Water Companies .....	Kerr & Co. ....	6	Dec.
Electric Power Industry .....	R. W. Pressprich & Co. ....	4	Nov.

\*Similar lists appeared in the November 11th, July 22nd, and March 18th issues of 1954; also in preceding years.

## FINANCIAL NEWS AND COMMENT

nominal level. Analyzing total new money financing: Sales of bonds and debentures ran about one-third lower than in 1953, preferred stocks were nearly the same amount, and common stock financing was down over 40 per cent.

Turning to the type of financing, the amount of securities sold to the public through competitive bidding increased about one-half and the amount of negotiated sales nearly doubled, while on the other hand sales through subscription rights declined 60 per cent and private sales declined about one-half. The substantial drop in subscription financing was, however, accounted for by the fact that American Telephone and Telegraph did not issue any rights to convertible debentures in 1954 as it had done late in 1953; adjusting for this fact, the decline was only 12 per cent.

Comparing electric utilities' financing for the two years, the differences were less marked. Negotiated sales to the public increased from \$196,000,000 to \$308,000,000 but, on the other hand, negotiated subscription offerings to stockholders dropped from \$203,000,000 to \$95,000,000. The amount of private financing declined sharply.

**S**UMMARIZING, the decline in new money financing for 1953 was offset by the substantial amount of refunding operations. At the present time the bond market is a little easier, possibly due to the big volume of municipal and turnpike financing, as well as the slight tightening of money by the Federal Reserve System. This may serve as a temporary check on utility financing. One important preferred stock issue, that of Public Service Electric & Gas, was recently postponed because market conditions were not "right"; and institutional buyers again showed their reluctance to go through a 3 per cent yield

basis, the offering syndicate having to reduce the Aaa-rated Duke Power 3s to par (from 100.751) before the issue could be cleaned up.

A number of electric utility companies have indicated that they do not expect to do equity financing this year, while in other cases such financing will be of smaller dimensions than in previous years. The extra cash obtained from tax savings resulting from accelerated amortization is a factor, of course.



### *Public Financing for Public Power*

**T**HE Eisenhower administration, while proposing large hydro developments on the upper Colorado river, seems anxious to relieve the Treasury Department of the burden of financing continued power expansion in other fields. This policy has provoked a storm over the Dixon-Yates proposal. But TVA needs much further expansion, as indicated in its twenty-first annual report, just released. TVA's difficulties spring from the sharp increase in the demands of the Atomic Energy Commission and other defense agencies, which now take over one-third of its total output and by next year may require one-half. This does not leave enough power for expanding civilian demand. Increased steam capacity now under construction will leave only a narrow margin over total requirements at the end of 1956, it is said, but Congress has refused to supply funds for new steam plants after that year.



### *A Valuable Utility Chart Book*

**E**BASCO SERVICES INCORPORATED has issued an interesting 63-page book of colored charts of statistics on economics

**PUBLIC UTILITIES FORTNIGHTLY**

**PUBLIC UTILITIES SECURITIES  
OFFERED FOR SUBSCRIPTION AND/OR SALE  
(000 omitted)**

	January 1 to December 31, 1954				January 1 to December 31, 1953					
	Total	Electric Companies	Gas Companies	Telephone Companies	Other Companies	Total	Electric Companies	Gas Companies	Telephone Companies	
Long-Term Debt Offered Publicly Offered through Subscription Offered Privately	\$2,643,755 99,122 220,526 \$1,063,403	\$1,214,950 49,122 191,200 \$1,425,522	\$62,305 50,000 261,236 \$1,003,631	\$506,500 - 17,800 \$355,300	- - 119,900 \$119,900	\$1,327,850 670,341 1,150,340 \$1,346,531	\$21,620 - 610,800 \$1,605,000	\$231,650 67,797 435,465 \$73,712	\$130,000 602,544 34,725 \$167,259	- - 119,520 \$119,520
Preferred Stock Offered Publicly Offered through Subscription Offered Privately	\$422,972 271,638 75,929 \$265,592	\$362,007 5,042 61,145 \$488,924	\$71,168 22,612 3,684 \$63,454	\$20,399 - 6,000 \$26,399	\$2,668 - 5,120 \$7,728	\$264,910 32,112 58,405 \$355,427	\$162,260 11,195 49,300 \$223,528	\$89,000 19,843 30,192 \$111,343	\$7,400 300 - \$7,700	\$10,250 - 2,605 \$12,855
Common Stock Offered Publicly Offered through Subscription Total	\$162,184 235,177 \$97,361 \$4,087,359	\$95,559 262,987 398,346 \$2,273,112	\$46,663 28,162 71,119 \$1,138,204	\$1,300 1,922 6,074 \$646,163	\$1,300 1,922 6,074 \$29,880	\$318,872 234,052 \$170,739 \$4,280,697	\$202,997 234,052 \$517,056 \$2,365,585	\$84,650 89,019 \$173,659 \$1,019,724	\$30,997 36,789 \$17,785 \$892,755	\$288 \$288 \$288 \$52,633
<b>REORGANIZATION OF FINANCING - BY PURPOSE</b>										
Total Refundings	\$1,026,882	\$777,476	\$460,108	\$57,228	-	\$4,461	\$15,742	\$17,572	\$600	\$20,567
Total Investments	\$ 49,509	\$ 1,926	\$ 39,638	\$ 7,945	-	\$ 10,668	\$ 2,237	\$ 8,431	-	-
New Money										
Long-Term Debt	\$2,150,076	\$1,083,727	\$551,355	\$195,056	\$19,900	\$3,100,857	\$1,555,200	\$719,065	\$166,669	\$19,225
Preferred Stock	342,249	255,369	55,622	23,300	7,758	348,543	216,897	111,343	7,700	12,613
Common Stock	\$150,641	314,614	31,481	62,328	2,222	766,148	819,819	163,315	67,786	226
Total New Money	\$2,602,926	\$1,633,120	\$63,858	\$90,920	\$29,880	\$3,217,668	\$2,317,668	\$931,721	\$182,155	\$13,026
Total Financing	\$4,087,359	\$2,273,112	\$1,138,204	\$646,163	\$29,880	\$4,280,697	\$2,365,585	\$1,019,724	\$892,755	\$52,633
<b>REORGANIZATION OF FINANCING - BY TIER</b>										
Competitive Bidding	\$2,218,625	\$1,355,178	\$317,887	\$505,000	-	\$1,466,477	\$1,133,866	\$234,671	\$130,000	-
Begotiated Sales	\$ 810,859*	\$ 307,278	\$ 138,204	\$ 43,550*	\$ 2,908	\$ 411,152*	\$ 192,651	\$ 166,668	\$ 36,359*	\$19,476
Competitive Bidding	\$ 141,986	\$ 91,986	\$ 50,000	\$ 13,906	\$ 1,922	\$ 131,758	\$ 97,538	\$ 31,320	-	-
Begotiated Sales	\$ 136,952	\$ 94,674	\$ 26,450	\$ 1,922	\$ 1,922	\$ 269,336	\$ 202,805	\$ 115,739	\$ 10,772	-
No Underwriting	\$ 183,046	\$ 130,491	\$ 20,648	\$ 31,907	\$ 31,907	\$ 701,226	\$ 51,685	\$ 26,681	\$ 628,860	-
Total Subscription	\$ 621,884	\$ 317,151	\$ 97,098	\$ 65,813	\$ 1,922	\$ 1,162,320	\$ 316,928	\$ 176,600	\$ 639,632	-
Private Sales	\$ 566,465	\$ 232,685	\$ 268,970	\$ 53,800	\$ 425,050	\$ 1,208,745	\$ 690,100	\$ 641,765	\$ 36,723	\$ 22,155
Total Financing	\$6,087,359	\$2,273,112	\$1,138,204	\$646,163	\$29,880	\$4,280,697	\$2,365,585	\$1,019,724	\$892,755	\$52,633

\* Includes \$1,500,000 preferred stock not underwritten.

Business Services Incorporated  
Corporate Finance Department  
January 3, 1955

## FINANCIAL NEWS AND COMMENT

and the utility industry. These are presented in six groups: general economics, utility financing, electric utility service, electric companies, natural gas, and government as an electric power producer.

The first section portrays the growth of our gross national product per capita during 1929-54, electric revenues as a per cent of gross national product, and the growth of consumer credit and personal savings as compared with personal income. The changing value of the consumer's dollar from par in 1913 to 37 cents at present is noted. Other topics shown graphically are the growth of per capita income in 1913 dollars, the gain in circulation of money since 1890, sectional changes in population and income payments, expenditures for research in the United States, and the trend of population from 1880 to 1955—with a forecast that it may reach 200-220,000,000 by 1975.

**I**N the section on financing the yield trends on utility bonds of various ratings are compared with Treasury bond yields by months for the last five years. Offering yields on new A-rated bonds sold by electric utilities in 1950-54 are compared with the contemporary average yields for all outstanding A bonds. It is interesting to note that in a period of rapidly rising money rates such as the first half of 1953, the yields on new issues may run far higher than the quoted rates on old issues, and conversely (though in less degree) the yields on new issues may drop lower than the averages when money rates are declining, as occurred in early 1954. Other charts show the changing yields on preferred stocks and common stocks over the past five years, and the composition of new money financing by electric utilities over the past five years.

Under the section on electric utility service, the total capability, peak de-

mand, and average demand (all in kilowatts) are shown for 1902-54. This chart indicates the heavy margin of reserve capacity during the early 1930's, the gradually narrowing reserve during 1935-53, and the substantial gain in 1954. It also indicates the rather sharp rise in peak demand compared with average demand, in recent years. The proportion of hydro and steam generation in 1950-54 is shown, and a breakdown by federal, private, and miscellaneous utilities. Other charts show sales of electricity to ultimate consumers and residential rates and usage since 1913. The percentage division of sales between classes of consumers is projected through 1970. Peak demand per capita is also shown from 1914 to date and projected through 1964 at an accelerating rate. Various graphic forecasts as to future electric capability and generation are shown. Hydro capacity in various sections of the U. S. is charted, showing that only 31,000,000 kilowatts have thus far been developed compared with 86,000,000 kilowatts potential. Several charts are presented on atomic energy.

Under the heading electric companies, construction expenditures for 1925-54 are shown and additions to capability, projected through 1957. The average age of steam-generating capacity, and the increasing efficiency of fuel-fired plants, is illustrated. Taxes are charted since 1937 and deferred taxes since 1951, and the code provisions for new kinds of tax depreciation are illustrated. A construction chart shows the number of months' time required to obtain delivery of various types of power plant equipment: Since 1952 the period for steam generators has dropped from thirty months to twenty months.

**U**NDER natural gas, major pipelines are mapped in relation to producing areas, and natural gas consuming territo-

## PUBLIC UTILITIES FORTNIGHTLY

ries (including proposed new areas) are shown. There are also charts on construction expenditures for the gas industry, sales, reserves, customers, house heating, etc.

The section under "government as an electric power producer" shows the location and status of 747 federal power proj-

ects totaling 69,000,000 kilowatts. Another chart indicates the projects recently removed from the federal program (about 3,400,000 kilowatts) and taken over by other builders. Changes in the federal power program since World War II, and recent federal appropriations for power projects, are illustrated.



### ELECTRIC UTILITY STATISTICS AND RATIOS

	Unit	Latest Month	Latest 12 Mos.	Per Cent Increase Latest Month	Per Cent Increase Latest 12 Mos.
<b><i>Operating Statistics</i></b>					
Output KWH—Total (October)	Bill. KWH	4.5	463.5	7%	6%
Hydro-generated	"	7.8	—	9	—
Steam-generated	"	32.7	—	7	—
Capacity (September)	Mill. KW	100.0	—	—	12
Peak Load (August)	"	79.7	—	7	—
Fuel Use (October): Coal	Mill. Tons	10.3	—	1	—
Gas	Mill. MCF	108.5	—	12	—
Oil	Mill. Bbls.	5.3	—	D22	—
Coal Stocks	Mill. Tons	47.2	—	2	—
<b><i>Customers, Sales, Revenues, and Plant (September)</i></b>					
KWH Sales—Residential	Bill. KWH	6.4	77	15%	12%
Commercial	"	5.3	57	10	8
Industrial	"	12.6	146	D3	D4
Total, Incl. Misc.	"	31.1	361	3	2
Customers—Residential	Mill.	33.1	—	3	3
Commercial	"	4.6	—	2	2
Industrial	"	.6	—	2	2
Total, Incl. Others	"	40.5	—	3	3
<b><i>Income Account—Summary (September)</i></b>					
Revenues—Residential	Mill. \$	182	2,165	13%	10%
Commercial	"	137	1,507	9	7
Industrial	"	146	1,695	D1	—
Total, Incl. Misc. Sales	"	513	5,899	7	6
Sales to Other Utilities	"	35	423	—	1
Misc. Income	"	11	235	23	7
Expenditures—Fuel	"	81	978	D7	D2
Labor	"	102	1,190	6	5
Misc. Expenses	"	77	915	3	4
Depreciation	"	52	611	12	12
Taxes	"	123	1,386	11	6
Interest	"	33	377	9	11
Amortization, etc.	"	—	—	NC	NC
Net Income	"	92	1,108	15	9
Preferred Div.	"	12	144	11	6
Bal. for Common Stk.	"	80	964	14	9
Common Dividends	"	70	696	13	11
<b><i>Electric Utility Plant (September)</i></b>					
Reserve for Depreciation and Amort.	"	5,244	—	9	—
Net Electric Utility Plant	"	21,851	—	10	—
<b><i>Life Insurance Investment (Week Ended January 1st)</i></b>					
Utility Bonds	"	—	8	—	33%
Utility Stocks	"	—	9	—	—
Per Cent of All Investments	"	—	6%	—	12

D—Decrease. NC—Not comparable.

**FINANCIAL NEWS AND COMMENT**

**RECENT FINANCIAL DATA ON GAS UTILITY STOCKS**

1953 Rev. (Mill.)		1/12/55 Price About	Divi- dend Rate	Approx. Yield	Share Earnings*			Price- Earns. Ratio	Div. Pay- out	Moody Mtg. Bond Rating
					Cur- rent Period	% In- crease	12 Mos. Ended			
<i>Pipelines</i>										
\$ 3 O	Alabama-Tenn. Nat. Gas .	19	\$.60	3.2%	\$1.45	7%	Sept.	13.1	41%	—
12 O	East. Tenn. Nat. Gas .	10	.60	6.0	.50	27	Sept.	20.0	120	Ba
38 S	Mississippi Riv. Fuel .	51	2.40	4.7	3.70	71	Sept.	13.8	65	—
48 S	Southern Nat. Gas .	32	1.60	5.0	1.86	D7	Sept.	17.2	86	A
133 O	Tenn. Gas Trans. .	30	1.40	4.7	1.80	11	Sept.	16.7	78	A
137 O	Texas East. Trans. .	25	1.40	5.6	1.62	22	June	15.4	86	Ba
63 O	Texas Gas Trans. .	21	1.00#	4.8	1.61	8	Sept.	13.0	62	—
59 O	Transcontinental Gas .	27	1.40	5.2	2.06	26	Sept.	13.1	68	—
Averages . . . . .					4.9%			15.3	69%	
<i>Integrated Companies</i>										
118 S	American Natural Gas .	48	\$2.00	4.2%	\$3.67	11%	Sept.	13.1	54%	—
18 O	Colorado Interstate Gas .	51	1.25	2.5	2.17	10	Sept.	23.5	58	—
232 S	Columbia Gas System .	16½	.90	5.5	.93	24	Sept.	17.7	97	A
9 O	Commonwealth Gas .	10	(a)	4.0a	.50	28	Dec.†	20.0	—	—
9 A	Consol. Gas Util. .	14	.75	5.4	.98	D9	July	14.3	77	—
191 S	Consol. Nat. Gas .	34	1.25	3.7	2.64	31	Sept.	12.9	47	Aaa
111 S	El Paso Nat. Gas .	44	2.00	4.5	2.32	D23	Oct.	19.0	86	—
32 S	Equitable Gas .	28	1.40	5.0	1.87	1	Sept.	15.0	75	A
10 O	Kansas-Neb. Nat. Gas .	28	1.20	4.3	1.87	14	Dec.†	15.0	64	Baa
72 S	Lone Star Gas .	28	1.40	5.0	1.73	13	Sept.	16.2	81	—
20 S	Montana-Dakota Utils. .	27	1.00	3.7	1.35	38	Sept.	20.0	74	Baa
14 O	Mountain Fuel Supply .	27	1.00	3.7	1.47	NC	June	18.4	68	A
49 A	National Fuel Gas .	20	1.00	5.0	1.52	19	Sept.	13.2	66	A
66 S	Northern Nat. Gas .	43	2.00	4.7	2.27	2	Sept.	18.9	88	A
32 S	Oklahoma Nat. Gas .	23	1.20	5.2	1.61	81	Oct.	14.3	75	—
95 S	Panhandle East. P. L. .	76	2.50#	3.3	4.93	D1	Dec.†	15.4	51	A
8 O	Pennsylvania Gas .	21	1.00	4.8	.86	D52	Dec.†	116	—	—
130 S	Peoples Gas Lt. & Coke .	161	7.00	4.3	10.55	8	Sept.	15.3	66	A
23 O	Southern Union Gas .	19	.90	4.7	1.39	64	Sept.	13.7	65	A
209 S	United Gas Corp. .	34	1.50	4.4	2.11	10	Sept.	16.1	71	A
Averages . . . . .					4.4%			16.4	73%	
<i>Retail Distributors</i>										
20 A	Alabama Gas .	28	\$1.28	4.6%	\$1.70	49%	Nov.	16.5	75%	Baa
32 O	Atlanta Gas Light .	23	1.20	5.2	1.71	D5	June	13.5	70	A
46 S	Brooklyn Union Gas .	33	1.80	5.5	2.69	60	Sept.	12.3	63	—
28 O	Central Elec. & Gas .	14	.80	5.7	1.10	10	Sept.	12.7	73	—
10 O	Central Indiana Gas .	15	.60b	4.0	.78	20	Sept.	19.2	77	A
4 O	Chattanooga Gas .	6½	—	—	.31	41	Aug.	21.0	—	—
44 O	Gas Service .	24	1.24	5.2	1.74	5	Sept.	13.8	71	A
6 O	Hartford Gas .	38	2.00	5.3	2.42	17	Dec.†	15.7	83	—
14 O	Houston Nat. Gas .	27	1.00	3.7	2.15	6	July	12.6	47	—
12 O	Indiana Gas & Water .	15	.70	4.7	1.17	22	Nov.	12.8	60	A
5 A	Kings Co. Lighting .	16	.80	5.0	1.26	26	Sept.	12.7	63	Baa
33 S	Laclede Gas .	13	.60	4.6	.85	D13	Sept.	15.2	71	A
27 O	Minneapolis Gas .	28	1.30	4.6	1.64	NC	Oct.	17.1	79	—
11 O	Mississippi Valley Gas .	22	1.00	4.5	1.81	D8	Sept.	12.2	55	—
8 O	Mobile Gas Service .	19	.90	4.7	1.12	D27	Sept.	17.0	80	—
6 O	New Haven Gas .	29	1.60	5.5	1.87	31	Dec.†	15.5	86	—
8 O	New Jersey Nat. Gas .	19	1.00E	5.3	1.51	36	June	12.6	66	—
54 O	Northern Illinois Gas .	21	.80	3.8	.77	NC	May	—	104	A
162 S	Pacific Lighting .	39	2.00	5.1	2.14**	D14	Sept.	18.2	93	—
111 O	Portland Gas & Coke .	24	.90	3.8	1.53	D15	Sept.	15.7	59	Baa
2 O	Portland Gas Light .	10	.75	7.5	1.20Est.	—	Dec.	8.3	63	—
8 A	Providence Gas .	10	.48	4.8	.41	21	Dec.†	—	117	—
3 A	Rio Grande Valley Gas .	3	.12	4.0	.23	5	June	13.0	52	—
6 O	Seattle Gas .	14	.40	2.9	.72	18	Sept.	19.4	56	Baa
7 O	South Jersey Gas .	23	1.20	5.2	1.55	19	Nov.	14.8	77	Baa
22 S	United Gas Improvement .	38	1.80	4.7	2.14	D5	Sept.	17.8	84	A
33 S	Washington Gas Light .	39	2.00	5.1	2.66	19	Sept.	14.7	75	Aaa
5 O	Western Kentucky Gas .	15	—	—	1.10	13	Dec.†	13.6	—	—
Averages . . . . .					4.8%			15.2	73%	

# PUBLIC UTILITIES FORTNIGHTLY

## RECENT FINANCIAL DATA ON TELEPHONE, TRANSIT, AND WATER UTILITIES

1953 Rev. (Mill.)		1/12/55	Divi- dend Rate	Approx. Yield	Share Earnings*			Price- Earnings Ratio	Div. Pay- out	Moody Mige. Bond Rating							
					Cur- rent Period	% In- crease	12 Mos. Ended										
<b>Communications Companies</b>																	
<i>Bell System</i>																	
\$4,417	S	Amer. Tel. & Tel. (Cons.)	173	\$9.00	5.2%	\$11.84**	3%	Aug.	14.6	76% Aa							
202	A	Bell Tel. of Canada	48	2.00	4.2	2.31	19	Dec.†	20.8	87 Baa							
34	O	Cin. & Sub. Bell Tel.	85	4.50	5.3	5.45	18	Dec.†	15.6	83 —							
144	A	Mountain States T. & T.	118	6.60	5.6	7.18	45	Aug.	16.4	92 Aaa							
237	A	New England T. & T.	138	8.00	5.8	7.66	2	Sept.	18.0	104 Aa							
579	S	Pacific Tel. & Tel.	130	7.00	5.4	8.84	39	Nov.	14.7	79 Aa							
74	O	So. New England Tel.	40	2.00	5.0	1.87	7	Dec.†	21.4	107 Aa							
<i>Averages</i>					5.2%				17.4	90%							
<i>Independents</i>																	
10	O	Calif. Water & Tel.	18	\$1.00	5.6%	\$1.48	22%	June	12.2	68% —							
11	O	Central Telephone	16	.90	5.6	1.61**	1	Sept.	9.9	56 —							
2	O	Florida Telephone	14	.80	5.7	.85	D14	Dec.†	16.5	94 —							
128	S	General Telephone	35	1.60	4.6	2.82**	D6	Nov.	12.4	57 Ba							
5	O	Inter-Mountain Tel.	14	.80	5.7	.93	43	Dec.†	15.1	86 —							
14	S	Peninsular Tel.	37	1.80	4.9	2.36	28	Sept.	15.7	76 —							
16	O	Rochester Tel.	17	.80	4.7	1.11	D10	Sept.	15.3	72 Aa							
2	O	Southeastern Tel.	13	.80	6.2	1.15	15	June	11.3	70 —							
7	O	Southwestern Sls. Tel.	19	1.00	5.3	1.54	12	Dec.†	12.3	65 —							
32	O	Telephone Bond & Share	21	1.00	4.8	1.50Est.	—	Dec.†	'54 14.0	67 B							
15	O	United Utilities	19	1.12	5.9	1.61**	D1	June	11.8	70 —							
195	S	Western Union Tel.	80	3.00	3.8	6.77	243	Dec.†	11.8	44 Ba							
<i>Averages</i>					5.2%				13.2	69%							
<i>Transit Companies</i>																	
29	A	Capital Transit	11	\$.80	7.3%	\$.75	D32	Sept.	14.7	107% Baa							
14	O	Cincinnati Transit	4	.75	18.8	.93	D17	Dec.†	4.3	81 —							
9	O	Dallas Ry. & Terminal	11	1.40	12.7	1.83	D21	Dec.†	6.0	77 —							
245	S	Greyhound Corp.	14	1.00	7.1	1.17	D10	Mar.	12.0	85 —							
26	O	Los Angeles Transit	18	1.00	5.6	1.20	4	Dec.†	15.0	83 —							
30	S	National City Lines	24	1.40	5.8	2.35	26	Dec.†	10.2	60 —							
73	O	Phila. Transit	12	.30	2.5	Deficit	—	Dec.†	—	Ba							
7	O	Rochester Transit	5	.40	8.0	.57	119	Dec.†	8.8	70 —							
27	O	St. Louis P.S.A.	15	1.40	9.3	1.22	30	Dec.†	12.3	115 —							
18	S	Twin City R.T.	18	1.60	8.9	.22	NC	Dec.†	—	Ba							
25	O	United Transit	4	—	—	.73	30	Dec.†	5.5	—							
<i>Averages</i>					8.6%				9.9	85%							
<i>Water Companies</i>																	
<i>Holding Companies</i>																	
32	S	American Water Works	11	\$.50	4.5%	\$1.03	D10%	Sept.	10.7	49% —							
4	O	New York Water Service	70	.80	1.1	1.38	NC	June	—	59 —							
<i>Operating Companies</i>																	
3	O	Bridgeport Hydraulic	31	\$1.60	5.2%	\$1.57	D3%	Dec.†	19.7	102% —							
11	O	Calif. Water Service	40	2.20	5.5	2.61	4	Nov.	15.3	84 A							
2	O	Elizabethtown Water	132	5.00	3.8	6.65	D4	Dec.†	19.8	75 —							
7	S	Hackensack Water	44	2.00	4.5	3.75	NC	Aug.	11.7	53 Aa							
4	O	Jamaica Water Supply	37	1.80	4.9	2.82	D1	Sept.	13.1	64 A							
3	O	New Haven Water	60	3.00	5.0	2.50	D10	Dec.†	—	120 —							
1	O	Ohio Water Service	26	1.50	5.8	1.50	D6	Sept.	17.3	100 —							
6	O	Phila. & Sub. Water	30	1.00c	3.3	2.58	NC	Oct.	11.6	39 —							
2	O	Plainfield Union Wt.	57	3.00	5.3	3.70	D7	Dec.†	15.4	81 —							
2	O	San Jose Water	39	2.00	5.1	2.75	44	Nov.	14.2	73 —							
9	O	Scranton-Springbrook	17	.90	5.3	1.33	14	Sept.	12.8	68 A							
3	O	Southern Calif. Water	14	.65	4.6	.84**	D7	Sept.	16.7	77 A							
3	O	West Va. Water Service	40	1.40	3.5	1.41	—	Sept.	—	99 —							
<i>Averages</i>					4.8%				15.2	80%							

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. D—Decrease. \*Earnings are calculated on present number of shares outstanding, except as otherwise indicated. \*\*On average shares outstanding. †December, 1953. #—A 2 per cent stock dividend was also paid December 30, 1953. (a)—Paid 4 per cent stock dividend. (b)—Paid 10 per cent stock dividend. (c)—Paid 5 per cent stock dividend. NC—Not comparable. E—Estimated.



## What Others Think

### British Telephone Depreciation Practice

ONCE yearly since 1912, British Post Office officials have been playing a little game of make-believe with the nationalized telephone and telegraph industries. Hypothetical commercial accounts, drawn up for each industry, show what might exist had government never stepped in. Far from being mere whimsicalities, these studies are necessary. They show what sort of profit and loss there might be, if a normal accounting system were in use and long-term interest rates on capital were paid, and if it charged all other departments going commercial rates for the services it renders.

The accounts, such as that of the British Post Office, discussed by *The Economist* in its issue of December 11, 1954, hypothecate to some extent the profit-and-loss concepts nationalization destroyed, so that officials and the general public may formulate at least some idea of what their industries and utilities are up to. Aside from that, of course the British Post Office, like its counterpart in the United States, is entirely tax exempt.

The current account of the Post Office, especially the telephone section, outwardly seems to be a favorable one, says *The Economist*. The Post Office has shared in the prosperity of the country; and a small but modestly growing profit is yearly handed over to the Exchequer "which

must go far to make up for the tax immunity enjoyed." The profit, £7,400,000, compared with the previous £4,900,000, is only 2.7 per cent of the total income, but the telephone account is, percentagewise, much greater, with a surplus of £5,500,000, over the previous £3,700,000, and far the biggest contributor to the total. As *The Economist* sees it, however, these figures tend to give a false picture of the real situation. Even in the operation of the telephone system, there is cause for concern. There are grounds to believe the nationalized telephone industry is eating up its capital.

THE catch to what is on paper as profit lies in the basic depreciation concept of the Post Office account, even though some modification has taken place. Depreciation is charged on the "straight-line" basis—that is, by writing off a fixed proportion of the original cost of each capital asset each year through its calculated life until, at the end, the value has been wiped off the balance sheet. In 1953, this "additional" allowance was £1,500,000. *The Economist* states on this point:

For seven years now the Post Office telephone account has been quietly tucking away small sums for additional depreciation. Leaders of progressive

## PUBLIC UTILITIES FORTNIGHTLY

private industry will note that the civil servants who run the Post Office decided that depreciation allowances that only provided for the replacement of prewar assets at prewar prices, were nonsense and would, if continued, mean living on capital, about as soon as the industrialists themselves made the same discovery. The Treasury has allowed the Post Office to make this furtive concession to financial orthodoxy for which the British tax system makes no provision, feeling no doubt that, like the illegitimate baby, it was only a little one. It was also a provision that cost the Treasury nothing whereas when private industry does it, it has to use money on which tax has been paid. Managements of the junior nationalized industries have also been given an example to study. The trouble is that this item cannot go on being only a little one. The Post Office has established a principle, but it has not finished the job.

**T**HE Auditor General's report plainly showed that both he and the Treasury know that a larger provision is needed:

With Treasury agreement special additional provision has been made in each year's accounts from 1946-47 up to the present year totaling £16,000,000. For 1948-49 and succeeding years the special additional provision has been 25 per cent of the telephone surplus after providing for interest on capital and normal depreciation. In agreeing to this basis of provision in 1949 the Treasury stated that in order to arrive at a permanent solution of the problem a complete revaluation of plant and a reassessment of plant lives would be necessary. I inquired as to the progress of this matter and was informed in October, 1953, that the question of depreciation provision was so closely linked with wider policy

questions that it could not be considered in isolation. It would have its place in discussions with the Treasury on various aspects of financial policy in the coming months.

**T**HE *Economist* makes its own calculations as to additional depreciation needed by the Post Office to prevent the "erosion of its capital." Balancing low-cost plant installed before the war with high-cost plant installed after the war, it concludes:

. . . All in all, the extra sum which is needed cannot be very different from half the straight-line depreciation figure. It is a fair shot that the present allowance is in the region of £10 to £15,000,000 a year too low. If it were proposed to make good the short falls of the past, the sum needed would be far more, but even a purist would hardly demand this.

To make good previous deficits, the sum would be far more. Since public capital is being and has been consumed faster than it is replaced, the £7,400,000 surplus is not, strictly and honestly speaking, a profit at all. The British Post Office, at its present fees and service prices, contains a considerable element of subsidy. This would have to be eliminated largely by price changes in the telephone section, since both postal and telegraph services do not require large fixed investments. The telephone service, by contrast, is a prospering service and a great consumer of capital, with a fixed investment of over £500,000,000. It can and should be self-supporting. The problem is to make it so.

How should the increased costs be borne? Since the costs of the service to the nationalized industry and the charges to the public should be proportionate, *The Economist* thinks there is "no shadow of justification" for raising the charge for

## WHAT OTHERS THINK

trunk calls. The coaxial cable has cheapened trunk calls to the point where if there were to be an adjustment, it ought to be downward. The argument to raise further the charge for local calls should be cast aside. It would increase call charges to the point where there would be a restriction on traffic on the telephone that has to be provided in any case. Clearly telephone rentals ought to stand the bulk of any increase.

Existing rentals raised £34,600,000 in the latest year, excluding private wires, which brought in a further £8,200,000. An average increase approaching a third seems to be needed.

**T**HAT is not an argument for an all-round increase of any such proportion. At the same time that rents for phones are raised, the rental structure ought to be revised. The present British rental structure gives a range of charges that is "wide, antiquated, and indefensible." The spread runs from £4 10 S for a "country, residential shared" line to £11 a year for an "urban, business exclusive" line. It costs no less but considerably more, in fact, to supply a country line than a town one. More cable and many more man-hours of travel are used. Certainly there is no obvious reason why, on the one hand, town should subsidize country, and on the other, business the home user. It is instructive also to note that today's cheapest telephone in Britain, the "country, residential shared" line, is only ten shillings a year more expensive than the cheapest prewar rental, then the "country residential exclusive" at £4 a year. Costs in the least expensive service are artificially depressed.

It is not therefore surprising that many of the 376,000 people on the current phone waiting list come from would-be users in this bracket. "For every customer who obtains this service cheap, another asks for it."

**T**HE antiquated nature of the British charge structure dates from the time when the Post Office, finding it much easier to supply a telephone than to sell one, carried the slogan of "a telephone in every home" into the small streets and into the countryside, practicing at the same time price cutting to get business. Today, the present scale of charges will continue making it much easier to sell a telephone than supply it. The British telephone industry, for the moment and in line with current prosperity, has a sellers' market. Therefore, it would be more reasonable policy right now not to aim at high profit on paper, but to eliminate the subsidy to the public by raising and rescheduling prices. To do this without placing much extra burden on industry, the gap between the cheap residential phones and the more expensive business lines would have to be narrowed.

Opinions may differ, *The Economist* admits, as to what would happen if that policy were adopted. If demand were inelastic, as some believe, it would be little affected by price. But irrespective of this, there is every reason for charging the economic price, modified and supplemented as necessary by a vigorous development program to provide the new exchanges as then demanded. Such a program might make the telephone system a self-supporting proposition.

## Pros and Cons on Dixon-Yates

**A**s the Dixon-Yates contract threatens momentarily to become permanently

established in law, controversy continues to obscure its implications for the future

## PUBLIC UTILITIES FORTNIGHTLY

of private and public power enterprises, and the relationship one will have to the other. What effect will the Dixon-Yates contract have on TVA? Several years ago, when AEC Commissioner Thomas Murray objected to the fact that TVA supplied all power in its area to atomic energy plants, friends of TVA on the commission readily agreed to permit private utility bids, says Willis J. Ballinger in *Human Events*. Since they figured no such utility could underbid TVA, adds the former *St. Louis Post-Dispatch* editorialist, their acceptance of the Murray proposal seemed meaningless except as a good-will gesture.

Ballinger says that TVA always could low bid the private utilities, "because, as a government corporation, it avoids two heavy expenses which private utilities have to bear: (1) TVA pays only a small part of the taxes a private utility would pay; and (2) while private utilities pay from 4 to 6 per cent for their capital, that of TVA is a gift from the federal Treasury."

He continues:

Last year TVA reported a gross power income of \$104,877,869 and expenses of \$85,583,760, which included \$3,418,110 that TVA voluntarily paid in taxes. A recent reliable study of TVA by the Arkansas Power & Light Company shows that, if last year TVA had paid its fair share of taxes (had been taxed on the basis of five private utilities operating in Tennessee), its tax remittance would have been around *eighty millions* instead of the \$3,418,110, its voluntary contribution to local treasuries—a difference of over seventy-six millions. And if TVA had paid its fair share of taxes plus even the low government interest rate of 3 per cent on its power investment (admitted by TVA to be over \$800,000,000), with provision for paying back in forty years this Treasury money, TVA's actual expenses

last year would have been around \$195,000,000 instead of \$85,583,760 as reported. TVA's gross power income of \$104,877,869 would have been utterly inadequate to cover them, and TVA rates to consumers would have had to be considerably raised.

**D**ESPITE such TVA advantages, Ballinger says, a group of five privately owned utilities, headed by Wesley McAfee, surprised TVA supporters by turning in a low bid to supply AEC with power from a proposed plant at Joppa, Illinois. This was just across the river from TVA's Shawnee plant. A contest developed and some other complications. Ballinger says of this:

Then things began to happen. The Joppa plant was hit by a series of devastating strikes. The Shawnee plant had some strikes fewer in number, and far milder. All the unions involved belonged to a labor federation fanatically in favor of TVA. Had labor partisans of TVA sought to insure completion of Shawnee first?

Anyway, as Joppa fell behind in the race, TVA spokesmen pointed to Shawnee as an example of the greater efficiency of government enterprise. Two labor leaders in the Joppa plant have been indicted for attempting to extort over a million dollars from the McAfee groups as the price of labor peace. But there are those who say more will ultimately come out.

The victory of Wes McAfee in taking even a part of an AEC contract away from TVA was frightening enough to its supporters. This was followed by some doings in Congress still more alarming to the apostles of TVA.

Congress in its last session refused to allow TVA to build a big steam plant at Fulton, Tennessee, although the ter-

## WHAT OTHERS THINK

ritory served by TVA needed more power. Had Congress finally become aware of the economic fraudulence of TVA's lower rates? Had Congress realized that they were due solely to TVA's ability to dodge taxes and command free capital from the federal Treasury?

There loomed the harrowing possibility that Congress might allow private companies to provide any further power needed in the Tennessee valley. And Congress might even get around to compelling TVA to bear its fair share of taxes, pay a reasonable return on its capital advanced to it by the government, amortize that capital, and stand on its own feet as a private utility has to do.

SINCE TVA, in Ballinger's view, was a "flaming symbol of the Socialism-to-be," the fury of the radicals was unleashed on the subsequent Dixon-Yates proposal. He referred to the attempt to inject the friendship of the famous golfer, Bobby Jones, with President Eisenhower as a discrediting maneuver which backfired. Memphis citizens were alarmed by "false charges that the Dixon-Yates contract would force TVA to raise its rates to them." A Senate Judiciary subcommittee branded the contract as monopolistic, and a former official of the Mississippi Power & Light Company suddenly appeared to give testimony of double bookkeeping and other irregularities, which he had failed to complain about during all the years to the SEC.

All these things, in Ballinger's view, point to a concerted effort of outraged but determined would-be Socialists to discredit the Dixon-Yates contract by any means possible. He adds:

But it is on the ground of *pro bono publico* that denunciation of the Dixon-Yates contract reaches white heat. It is charged that AEC will pay a great deal

more for Dixon-Yates power than TVA would charge; that the Dixon-Yates group stand to make 9 per cent on the money provided; that the government must reimburse the Dixon-Yates group for all increases in the cost of labor, coal, and taxes; that, in brief, the whole contract is a guaranteed bonanza "for greedy private power interests."

To these charges Ballinger points out that (1) the Dixon-Yates contract is for twenty-five years, with "customary" protection from unforeseeable cost increases; (2) that the over-all return on the private capital to be invested would be only 3.7 per cent, most of which would be on bonds (over \$100,000,000), and only a small portion of equity risk capital (\$5,-500,000) would get the much publicized 9 per cent; (3) the plant would pay all taxes (state and local). Ballinger concludes:

. . . It comes down to two choices: (1) if TVA supporters win, taxpayers immediately will have to put up over \$100,-000,000 to build its plant . . . (2) if the Budget Bureau wins, taxpayers will save \$100,000,000, and sound private enterprise will have scored a victory.

Senator Fulbright is an ardent supporter of TVA, yet is also honestly convinced that the Dixon-Yates contract is definitely *pro bono publico*—in fact, a bargain for the government.

FOR a diametrically opposite viewpoint, Ralph McGill, editor of the *Atlanta Constitution* and a representative of those advocating public power, thinks that Dixon-Yates means the opponents of TVA are unjustly out to destroy it, making it seem "an operation entirely subsidized by the government." This is untrue, in his mind. Of the 3½ per cent net profit on its power installation this year, the 4 per cent it has averaged annually, and from the

## PUBLIC UTILITIES FORTNIGHTLY

profits of future years, TVA is required to pay back into the federal Treasury across a period of forty years the total cost of all its power installations. So far it has returned towards the initial investment, \$101,000,000, of which \$20,000,000 was returned during the last fiscal year. In addition, TVA has paid about 5 per cent of its power sales revenues, exclusive of those from federal agencies, in lieu of taxes. He stated:

The enemies of TVA may argue about these figures all they wish, but the truth remains—TVA does pay "taxes," it is not getting a free ride at the expense of the taxpayer. . . . More than that, it is TVA which is carrying a major load of national defense in the power field. Without TVA, the atomic bomb and later developments would have been long delayed. Future defense plans depend largely on TVA.

In view of the so-called "invasion" from Dixon-Yates and the difficulties experienced by TVA in securing expansion funds from the Eisenhower administration, a recent editorial in the *St. Louis Post-Dispatch* explores an alternate financing method that might be used by the agency, as it was proposed by General Vogel. The newspaper feels that the idea of financing new TVA power plants by revenue bonds, instead or by congressional appropriations, raises several questions:

Would revenue bonds increase the

cost of money to TVA? If so, would higher-cost money cause an increase in TVA power rates? Would revenue bonds give the bond underwriters, in addition to Congress and the TVA itself, a voice in determining TVA policies? Would the reliance on bonds instead of appropriations allow TVA to become a free-wheeling public corporation free of the close congressional supervision originally contemplated for it? . . . (Since) General Vogel believes that TVA has "a very definite responsibility" to furnish its market area with all the power that area needs . . . the question that immediately arises is why General Vogel does not apply it to the Dixon-Yates controversy.

In the view of the *Post-Dispatch*, the Dixon-Yates contract calls for construction of a relatively high-cost private power plant, with relatively high-cost private financing, to supply the TVA market under the guise of supplying the Atomic Energy Commission.

But it adds:

If General Vogel can show that the financing of this plant by TVA revenue bonds would be more advantageous to the taxpayers than financing it out of congressional appropriations, well and good. But however the plant is financed, TVA does indeed have a "very definite responsibility," which it cannot unload on AEC or Dixon-Yates, to supply the growing needs of its customers.

---

"**T**RUTH in advertising,' applied to the political field, calls for a high level of intellectual honesty. If, for example, the Eisenhower administration advocated shifting jurisdiction of certain offshore oil rights from the federal government to the states, was that, in truth, a 'give-away' policy? Likewise, is it a 'give-away' policy to restore private enterprise in the electric light and power field or in the realm of atomic energy? The real criterion is whether to veer toward Socialism or free enterprise and voluntary decentralized action."

—LEWIS HANEY,  
Columnist.

# The March of Events



## FPC Grants Conditional Gas Rate Boosts

**T**HE Federal Power Commission last month told six interstate pipeline companies they could start collecting rate increases totaling \$9,700,000 a year, providing they agree to make any refunds the FPC may order later. The commission has not finished its investigations into whether the rate increases sought by the firms are just and reasonable.

As a result of the FPC's action, North-

ern Natural Gas Company, Omaha, could start collecting an \$8,100,000 rate boost as of December 27th. The other increases, all of which go into effect as of December 15th, are East Tennessee Natural Gas Company, Knoxville, \$274,000; Alabama-Tennessee Natural Gas Company, Florence, Alabama, \$74,000; Tennessee Natural Gas Lines, Inc., Nashville, \$184,000; Lake Shore Pipe Line Company, Ashtabula, Ohio, \$46,000; and Hope Natural Gas Company, Clarksburg, West Virginia, \$1,000,000.

## California

### May Get Water by Atomic Power

**C**ALIFORNIA's state department of public works released an exchange of correspondence last month that predicts atomic power plants may play a big rôle in the state's proposed \$1 billion Feather river project.

The exchange involves an offer by Pacific Gas and Electric to buy electric power

generated at the proposed Oroville dam, the key unit in the Feather river project. The letters show PG&E offered to pay 8 mills a kilowatt for the power, some of which the state indicated it would have to sell as a means of financing the pumping of Feather river water to southern California.

The water would be moved southward through a series of canals and pumping stations.

## Kentucky

### Gas Rate Increase Postponed

**T**HE Louisville Gas & Electric Company will not be allowed to increase its

gas rates until July 1st or until the state public service commission gives its permission, whichever comes earlier.

## PUBLIC UTILITIES FORTNIGHTLY

That was the effect of action taken in Frankfort recently by the commission. It suspended for five months, effective February 1st, the utility's request for higher rates. Meanwhile, a hearing on the proposal was continued and no date set.

The company had asked that it be allowed to put the higher rates into effect

during February so that they would be reflected in users' March bills. The company's request to raise the rates in February was subject to refunds of the added charge if the application was finally turned down.

The raise would net the company \$916,000 a year.

### Rhode Island

#### State AEC Urged in Bill

**A**N unpaid state atomic energy commission of five members would be created under provisions of a bill Governor Roberts presented to the state general assembly last month.

By enacting the proposed legislation the assembly would recognize officially "the need for a program to encourage the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with common defense and security and with the health and safety of the public."

Functions of the commission, whose members would be named by the governor, were set forth in the measure.

It would be the duty of the commission, for instance, to study the need of changes in laws and regulations administered by any state agency that would arise from the presence within the state of special nuclear materials and from the operation of production or utilization facilities.

#### House Passes Administration Bill

**H**OUSE Democrats rode over Republican opposition recently and passed, 61 to 15, an administration bill requiring common carriers and public utilities to pay 45 per cent of the cost of operating the state public utility administrator's office.

The bill, one of 11 administration measures passed at a 90-minute session, requires a senate vote.

A companion bill, compelling utilities to give notice of expansion plans to the public utilities administrator, was passed on a voice vote, with no opposition expressed. It, too, requires a senate vote.

#### People's Utility Counsel Sought

**G**OVERNOR Roberts sent to the state general assembly recently legislation creating the office of people's counsel to represent ratepayers, patrons, and the general public in public utility matters.

Should the legislature approve the bill, the governor would name the appointee, "an experienced and qualified" attorney, who would serve at his pleasure. Salary is not specified, but the bill would appropriate \$10,000 to carry its provisions into effect during the next fiscal year.

The people's counsel would be given authority under the bill to appear on behalf of the public in all investigations and hearings conducted by the public utility administrator, the public utilities hearing board, and before any state or federal court, bureau, or commission in any matter involving rates, service, extensions, contracts for service, valuation of utility property, utility applications for issuance of securities or mergers, and in other matters.

## THE MARCH OF EVENTS

### Washington

#### Utility Tax to Aid Schools

**A**N excise tax on all public utilities amounting to 20 per cent of their gross income to be allocated to the common school fund was proposed recently by Republican Senator John H. Happy. The Spokane lawmaker said he was drafting such a bill, with the provision that utilities presently taxed will be given credit for all taxes paid by them before the 20 per cent levy is applied. This would make the tax light on all private utilities and would apply particularly to public utility districts which are publicly owned and which are not now on the tax rolls.

#### Priest Rapids Loan Proposed

**A**N appropriation of \$1,000,000 by the state legislature as a loan to the state power commission for engineering work on the Priest Rapids power project was advocated by Governor Arthur B. Langlie in his message to the joint session last month.

He said the commission has the facilities and the financial standing to move promptly in the development of low-cost power to meet the growing requirements of the Pacific Northwest.

"Aside from the federal government itself," he said, "it is difficult to find any

agency, public or private, that is as well equipped as the state power commission to undertake for the people the development of electric generation and its integration into the regional power system while effectively protecting the rights of the people."

It was subsequently reported that the chairman of the house public utilities committee was drafting a bill which would abolish the state power commission. He said champions of public power would take the offensive in a rapidly developing battle over state power policies. His bill was prompted by the power commission's dispute with Grant County Public Utility District over the right to build Priest Rapids dam, it was said.

#### PUD-WWP Deal Broken off

**N**Egotiations between Stevens County Public Utility District 1 and officials of Washington Water Power Company on counterproposals of purchase have been broken off following a joint conference, it was reported last month.

The company, in the recent conference, submitted a figure which it considered fair, but the PUD refused to submit any figure and announced that further negotiations seemed to be useless and that it would proceed with the condemnation suit now pending, Mr. Robinson said.

### Wisconsin

#### Gas Customers to Get Refund

**N**ATURAL gas customers in the Madison area are due for refunds of more than \$280,000, it was announced recently.

Madison Gas & Electric Company will get \$127,303 from Michigan-Wisconsin Pipe Line Company for distribution to its gas users; Wisconsin Power & Light Com-

pany, Madison, \$151,103; and the Stoughton Light & Fuel Company, \$3,939.

Utility experts at the state public service commission said the average refund to Madison Gas & Electric space-heating customers should be about \$12.40, and for home cooking and hot water heating users about \$1.80, depending upon how long they had had gas service and the amount of use.



## Progress of Regulation

### Court Differs with Commission on Cost Rate Base and Pension Premium Amortization

THE Maine supreme court reversed a commission order allowing an electric company a much lower rate increase than requested. The court sustained a number of the nineteen exceptions filed and remanded the case to the commission for a decree on the existing record, in accordance with the court's opinion.

#### *Erroneous Computation*

The first point on which the commission erred was in its computation of original cost less depreciation. This was one of the factors to which state law required that the commission give due consideration. The commission, in trying to eliminate any excess over original cost, subtracted from net operating property the amount of Account E-371 (the account in which acquisition payments in excess of original cost were accumulated). The error in such a computation lies in the application of the gross figure of Account E-371 to a net depreciated figure to arrive at a net figure. The simile used by counsel for the company was considered apt: "One cannot add pears to potatoes and get potatoes."

#### *Current Cost Factor*

An examination of the commission's conclusions as to fair value indicated that

the rate base adopted was barely 3 per cent over the original cost depreciated. This was not considered sufficient in a state in which the legislature required that current cost be considered in arriving at a rate base. The court said:

... the factor of current value is *the only one* which in any way reflects the greatly increased costs which seem to have become implemented into our economy. We cannot escape the conclusion that the commission based its findings on a preconception that the legislature is in error in using current value as a factor. It is not enough to give mere token recognition of a factor imposed by legislative mandate. The factor, properly determined, must find appreciable reflection in the end result. In the light of what everyone knows about increased costs generally, we do not believe that an increase over original cost depreciated of barely over 3 per cent is an appreciable reflection of the impact of inflation upon values.

#### *Recognition of Inflation*

The court noted that there had been a substantial inflation and quoted a Delaware court decision to the effect that judges are not necessarily ignorant in court of what

## PROGRESS OF REGULATION

everybody else and they themselves out of court are familiar with. There is no reason why judges should pretend to be more ignorant or unobserving than the rest of mankind. This principle when applied to the commission in this proceeding would obviously require that the valuation of utility property be more than 3 per cent of original cost depreciated if any serious consideration were given to current cost.

### Pension Amortization

In 1946 the company set up an insured pension plan for its officers and employees as part of its wage structure. Substantial premiums were paid on account of the past services of its then employees. The company elected to amortize this payment over a 10-year period, the shortest allowable under the Internal Revenue Code. The commission ordered that amortization be spread over a 30-year period.

The court first recognized the principle that interest on the unfunded actuarial reserve requirement for pensions should be included as an operating expense. The court's reasoning in allowing the 10-year period is reflected in the following statement:

The reason usually advanced is that present and future consumers are deemed to benefit from the increasingly contented work force which results from an equitable wage structure including the granting of past service pensions. It seems clear that the longer the past employment of an employee continued, the shorter will be the time during which he

will serve before retirement and benefit the company and its customers as a satisfied employee, but the greater will be his impact on the premium for past services. This suggests the fairness to future consumers in not extending the amortization period too far into the future. It is the consumer of the relatively near future who will benefit most from the expenditure of the past service premium.

### Return Allowance

The court approved the return computation arrived at by the commission in the amount of 5.9 per cent and said there was substantial evidence to support this finding. The court indicated in its remand order that the court's authority did not include the right to find a fair value or determine what the rates should be. *Central Maine Power Co. v. Maine Pub. Utilities Commission (Me Sup Jud Ct) October 19, 1954.*

### Commission Action on Remand

The commission on receiving the case on remand determined a fair value rate base which exceeded the original cost depreciated by over 9 per cent. The return allowance was reduced to 5.8 per cent. The rates which would provide such a return would in the words of the court "strike a nice balance between the essential revenue needs of the company and the value of the service to the ratepayers and their ability to pay." *Re Central Maine Power Co. FC No. 1410, December 14, 1954.*



## Accounting Treatment Prescribed for Customer Contributions Toward CATV System Construction

THE Wyoming commission, in approving an application for authority to operate a community antenna television

system, gave careful consideration to the accounting treatment to be given plant constructed with funds supplied by the

## PUBLIC UTILITIES FORTNIGHTLY

customers. The company planned to finance its construction by charging commercial subscribers from two to three hundred dollars and residential subscribers \$150 to hook on to the cable constructed by the company so that a strong television signal could be supplied an area in which an ordinary household antenna would not provide satisfactory reception.

### *Refund Bond Required*

At the outset the commission observed that the Public Utilities Act does not prohibit such financing and that if the public were willing to pay the proposed charges, the commission would not say that they did not have the right to do so. The commission did require that a bond be filed to guarantee a pro rata refund of any overpayments toward the construction cost.

### *Accounting Rule Prescribed*

The problems which confront a utility whose plant has been constructed almost entirely with funds supplied by customers were next considered. All of such contributions would be excluded from the rate base.

No depreciation could be accrued on customer supplied plant. Over a period of time when these facilities were used up in the company's operation, the customers'

contributions would be depleted without reimbursement to anyone.

As a solution to this problem, the commission prescribed an accounting rule by which the customer contributions could be amortized out of earnings. The rule follows:

The corporation shall charge all new construction to the appropriate property account without reference to the source of the funds. It shall compute annual depreciation in the first instance against all property in service including contributed property. To offset the depreciation computed against contributed property, the amount of each year's contributions credited in that year to the contributions account shall be amortized from that account to depreciation reserve over a period approximately equivalent to the estimated service life of the property constructed out of contributions. The total amount of the amortization in each calendar year shall be deducted from the computed amount of annual depreciation for that year and the balance charged to operating expenses for depreciation. All retirements of property shall be charged to depreciation reserve.

*Re Cody Community Television Corp.  
Docket No. 9269, December 6, 1954.*



### Condemnation for Underground Gas Storage Authorized

THE Laclede Gas Company received from the Missouri commission authority to condemn certain underground areas for the storage of gas. This was deemed the most feasible and economical method presently available to the company for increasing its supply of gas for distribution to the public. The commission found that the storage combined the elements of public necessity, utility, expedi-

ency, and suitable location in the areas.

The company asked for the order in furtherance of its proposal to store gas underground so as to be fortified in the event it should become necessary to invoke condemnation processes in connection with the project. The commission pointed out that the company was not seeking an order that the underground storage of gas was in the public interest. The statute does not

## PROGRESS OF REGULATION

require an order authorizing condemnation in advance of, or as a condition precedent to, the company's development of an underground gas storage reservoir. However, the company cannot exercise the rights of condemnation unless it has an order authorizing such action.

### *Nature of Storage Area*

The reservoir bed in which it was proposed to store natural gas lies more than a quarter of a mile beneath the surface of the earth. It has for a cap above it three formations of dense limestone, dolomite, and shale, having a thickness of almost 300 feet. Scientific tests indicate that such cap is impermeable to the movement of gas through it. The reservoir bed and the sealing beds constitute a trap which will restrain the gas stored.

The commission found a tremendous demand in the company's service area for natural gas for house heating which could be economically supplied only by the proposed underground storage. This demand has remained unabated in spite of the opportunities of the people to obtain fuel oil and coal for house heating.

Those objecting to the storage claimed that it was preferred by the company to other methods of augmenting its gas supply solely because it was more economical, suitable, and feasible to the company. The commission rejected this contention and treated it as mere argumentative opinion

to the effect that the company's sole interest was cupidity. Evidence indicated that the company has been obliged to obtain commission approval of restrictive measures in its service because of its limited supply of gas. The commission visualized the pressure put upon the company's officers for gas for house heating which it was unable to supply.

### *Motions to Dismiss*

Intervenors challenged the commission's jurisdiction on the ground that exclusive jurisdiction was lodged in the Federal Power Commission under the Natural Gas Act. The commission rejected this argument, stating that the act conferred exclusive jurisdiction upon the Federal Power Commission respecting the interstate transportation and sale of natural gas for resale, but left to the state the local regulation of the sales of purchased gas. Consequently, it held that the Natural Gas Act did not render inoperative the state's Gas Storage Act.

The commission also ruled that nothing in the Gas Storage Act indicates that unsuccessful negotiation for the needed property rights is a condition precedent to the maintenance of this proceeding, the object of which is to obtain an order that it is in the public interest for the company to condemn property rights when necessary. *Re Laclede Gas Co. Case No. 12677, November 19, 1954.*



## Injunction against Natural Gas Storage

A COAL company sought to enjoin a gas company from storing natural gas in strata directly underlying portions of its coal-mining areas. The gas company was engaged in both interstate and intrastate commerce and was subject to regulation by both federal and state commissions. The

Pennsylvania supreme court pointed out that, even though the gas which was stored was transported in interstate commerce, once it had come to rest in the company's facilities, it was subject to local regulation.

The fact that the facilities were subject to the state commission's regulation and

## PUBLIC UTILITIES FORTNIGHTLY

control did not prevent the court from granting injunctive relief against the storage since such storage was dangerous to the lives and property of others.

In answer to the contention that the cessation of use of the underground facilities would constitute abandonment and that abandonment may be had only with the approval of the commission, the court said:

The answer to this is that there is no abandonment directed by the court at this stage of the proceedings. Abandon-

ment necessarily implies the voluntary or intentional act of the party having the facility, right, or power to relinquish it. Here, if the court should grant full injunctive relief, the cessation would be forced upon defendant. See *Re Pearlman's Trust*, 348 Pa 488, 35 A2d 418, 150 ALR 832. Furthermore, the court may grant relief short of what it particularly considers a cessation. See *Meth v. Meth*, 360 Pa 623, 62 A2d 848.

*Emerald Coal & Coke Co. v. Equitable Gas Co.* 107 A2d 734.



### Commission's Refusal to Allow Submetering and Resale of Electricity Upheld

THE practice of submetering and reselling electricity by landlords to commercial tenants in New York city had been terminated by the New York commission. However, such resale had been allowed to continue at premises where it had been carried on at the cut-off date. In reviewing a commission order disallowing a landlord's application for authority to resell electricity in a new building, the New York supreme court was called upon to determine through what physical permutations in structures on land the right to resell electricity "at premises" survived.

The landlord's new building had replaced an old submetered building which had been reselling electricity. Prior to the erection of the new building, the land had lain vacant for over a year. The court, in affirming the commission's denial, stated:

To hold that the owner of vacant land would always automatically and invariably come within the exception if he had sold electricity to tenants on July 31, 1951, would open the way to radical extension of the right to submeter and resale in larger structures and to tenant

groups of greater magnitude than those previously served. The regulation ought not necessarily to be construed that way; and it seems to us reasonable to rule, as the commission has, that the right of petitioner to sell electricity at the "premises" 761-765 Broadway terminated when the old buildings were demolished and replaced by the new one.

The commission had retained the right to permit resale even though the landlord was not reselling electricity to tenants on the cut-off date. The landlord claimed that, because the commission had granted permission to other applicants, the disallowance was discriminatory. The court noted that in each case of approval, the structure had been designed for submetering and was well on the way to completion at the cut-off date. In the instant application, the land was vacant almost a year after the cut-off date.

#### *Port Authority Not Analogous*

The landlord cited the permission given to the Port of New York Authority to submeter at Idlewild Airport, to aid its con-

## PROGRESS OF REGULATION

tention of discrimination. Only the most tenuous analogy could bring the landlord's situation close to that at the airport, thought the court. There, many miles of wire and other distribution facilities were owned by the authority and the utility could not be required to render direct serv-

ice through these facilities, or as a practical matter be required to build parallel installations. The tariff was not intended to prohibit submetering where the utility itself was unable to furnish direct service to the consumer. *Re Trustees of Sailors' Snug Harbor*, 135 NYS2d 110.



### Rate Differential between Rail and Truck Carriers Upheld

**S**EVEN motor carriers brought an action in the United States district court against the Interstate Commerce Commission and ten railroads. An injunction was sought against the commission order which allowed the railroads lower rates than the published motor carrier rates for hauls longer than 75 miles.

Noting that it could not set aside a rate order of the Interstate Commerce Commission unless the rates were confiscatory, or the commission had acted arbitrarily in fixing the rates, or exercised its authority

in an unreasonable manner, the court affirmed the order and denied the requested injunction.

The evidence showed that, in the movements involved, the railroads could not compete with petroleum tank truck carriers on a parity of rates. The rates which the commission had described were compensatory and not lower than necessary to meet the competition, and were in furtherance of the national transportation policy. *Ward Transport, Inc. v. United States*, 125 F Supp 363.



### Order Affirmed When Commission Reaches Right Destination over Wrong Route

**T**HE Kentucky court of appeals affirmed a lower court decision sustaining a commission decision setting aside an order approving a rate increase for a gas and electric company on procedural grounds. The commission originally had allowed the increase but subsequently, after a customer complained, set aside the approval because the company had not complied with a commission regulation requiring publication of a notice of the change for three consecutive weeks prior to the filing.

#### *Invalid Regulation*

The court upheld the company's contention that the regulation on which the commission based its decision was invalid.

A statute provided that no rate increase could be made effective except upon twenty days' notice to the commission. The court held that the regulation in question was an improper attempt by the commission to materially alter the enactment.

#### *Commission Order Affirmed*

The court did not limit the review of the commission action to the one ground relied upon. In fact, several other valid requirements had not been complied with and were legitimate reasons for the commission's action. Some of these related to the filing of complete copies of the tariffs with the commission at least twenty days prior to their effective date, the filing of

## PUBLIC UTILITIES FORTNIGHTLY

detailed financial reports with the commission, and exhibiting of proposed changes in the company's places of business.

The fact that the commission rested its decision on an invalid regulation did not preclude the court from considering whether

there were other valid reasons for the commission decision. A proper order must stand "even though the commission traveled the wrong route when . . . it reached the right destination." *Union Light, Heat & Power Co.* 271 SW2d 361.



### Other Important Rulings

*Carrier Recovers Additional Charge.* The New York supreme court held that a carrier was entitled, under its tariff, to receive an additional charge for performing pick-up service from the interior of a shipper's building where the shipping room was enclosed by the outer wall of a ware-

house and the carrier, upon request, carried the merchandise on hand trucks out of the shipping room, across the loading platform, and into the trucks. *Bianchi (Federal Transportation Lines) v. Sears, Roebuck & Co.* 284 App Div 709, 134 NYS2d 495.

## Titles and Index

Preprints in This Issue of Cases to Appear in  
PUBLIC UTILITIES REPORTS

### TITLES

General Teleph. Co. of California, Renninger v. ....	(Cal)	93
Missouri Pub. Service Co., Re .....	(Mo)	88
New England Teleph. & Teleg. Co. v. Massachusetts Dept. of		
Pub. Utilities .....	(MassSupJudCt)	65
North-West Teleph. Co., Welnitz Bros. v. ....	(Wis)	79
Pierce Bus Lines, Re .....	(Mass)	91
San Miguel Interurban Teleph. Co., Re .....	(Cal)	83
South Central Railroad v. Arkansas & L. M. R. Co. ....	(La)	95

### INDEX

Expenses—pension freezing payments, 65.  
Rates—commission jurisdiction, 79; cost of natural gas supply, 88; foreign exchange telephone service, 79; joint through railroad rates, 95; operating rights as factor, 91; operation at a loss, 83; test period, 65; transit company, 91.  
Return—debt ratio factor, 65; natural

gas company, 88.  
Security issues—debt ratio factor, 65.  
Service—abandonment of telegraph service, 83; customer preference for telephone exchange, 79; denial for unlawful use, 93; discontinuance of small telephone exchange, 83; foreign exchange telephone service, 79; restoration of facilities, 93.  
Valuation—rate base, 65.

*Public Utilities Reports (3d Series)* are published in five bound volumes a year, with the P.U.R. Annual (Index). These reports contain the decisions of the state and federal regulatory commissions, as well as court decisions on appeal. The volumes are \$7.50 each; the Annual (Index) \$6.00. *Public Utilities Reports* also will subsequently contain in full or abstract form cases referred to in the foregoing pages of "Progress of Regulation."

NEW ENGLAND TELEPH. & TELEG. CO. v. DEPT. OF PUB. UTIL.

MASSACHUSETTS SUPREME JUDICIAL COURT, SUFFOLK

New England Telephone &  
Telegraph Company

v.

Massachusetts Department of  
Public Utilities

— Mass —, 121 NE2d 896  
September 20, 1954

**R**EVIEW of department order disallowing telephone company's proposed rate increase and directing filing of new schedules; recommitted to department for findings in accordance with opinion.

*Valuation, § 27 — Rate base — Measures of value.*

1. The court will not require the department to adopt any particular measure of value or combinations thereof for determining a telephone company's rate base, p. 73.

*Appeal and review, § 48 — Interfering with rate-making power — Confiscation as prerequisite.*

2. The court will not interfere with the rate-making power of the department unless confiscation is clearly established, p. 74.

*Security issues, § 99 — Capital structure — Proportion of debt.*

3. The reduction of a telephone company's debt ratio is within the discretion of the company's management, p. 74.

*Return, § 26.1. — Debt ratio — Actual and assumed.*

4. The department's action, in fixing a telephone company's rates upon the basis of an assumed debt ratio of 45 per cent, even though the company had cut its actual debt ratio to 36.1 per cent, is not unlawful or confiscatory, p. 74.

*Expenses, § 49 — Pension freezing payments.*

5. The allowance of only one-half of a telephone company's pension freezing payments as operating expense is arbitrary and unreasonable if unsupported by evidence, p. 75.

*Expenses, § 49 — Pension freezing payments.*

6. A telephone company should be allowed to deduct, as operating expense, the full amount of payments made into a pension fund equal to the income which the frozen unfunded reserve would have earned were it an actual fund available for investment, p. 75.

## MASSACHUSETTS SUPREME JUDICIAL COURT

### *Appeal and review, § 54 — Extent of error — Expense allowance.*

7. The court will not overlook an error by the department of \$192,000 disallowed as an operating expense, as being too "insignificant" in comparison with other figures in the case, p. 77.

### *Rates, § 120.1 — Reasonableness — Test period — Contemporary data.*

8. A telephone company's rate base should be raised to reflect a substantially increased investment so that the company may conduct its operations with the allowed revenue more nearly based upon contemporary data where the company has, in the past, failed to earn the allowed rate of return, p. 77.

**APPEARANCES:** Charles C. Cabot (John M. Gepson, Charles Ryan, Robert H. Montgomery & William M. Hogan, Jr., Boston), for plaintiff; Matthew S. Heaphy, Assistant Attorney General, Edward N. Gadsby, Litton (Jason A. Aisner, Assistant Attorney General, with them), for defendants.

Before Qua, CJ., and Ronan, Wilkins, Spalding, and Counihan, JJ.

**WILKINS, J.:** This appeal by the company under GL (Ter Ed) Chap 25, § 5, as appearing in Stats 1953, Chap 575, § 1, is to review orders of the department entered on September 30, 1953, and later amended,<sup>1</sup> which disallowed rates and charges filed by the company on December 10, 1952, to take effect on January 10, 1953, and April 1, 1953, and ordered the filing of new schedules.

The disallowed rates were designed to increase current earnings by \$10,225,000. As in *Department of Public Utilities v. New England Teleph. & Teleg. Co.* (1950) 325 Mass 281, 283, 284, 82 PUR NS 142, 90 NE2d 328, the department suspended the application of the proposed rates for ten months, the maximum period

<sup>1</sup> Before the department the proceedings were known as DPU 10,349 and DPU 10,564, 2 PUR3d 464.

permissible. GL (Ter Ed) Chap 159, § 20, as amended by Stats 1939, Chap 18. Hearings before the department began on February 17, 1953, and ended on July 22, 1953. The new schedules ordered to be filed on September 30, 1953, were designed to increase gross annual intrastate revenues by not more than \$4,519,450. The decision of the department expressed belief that this increase would produce a return upon net original cost of the company's property in this commonwealth of 6.313 per cent. Such return was to be at a rate of 8.5 per cent upon, common stock capital and at a rate of 3.64 per cent on debt capital.

On October 13, 1953, the company, without waiving its right to appeal, filed new schedules. Following entry of this appeal, a single justice stayed the orders subject to a repayment bond, see Rule 46 of the Rules for the Regulation of Practice at Common Law and in Equity (1952) 328 Mass 725, and the rates filed on December 10, 1952, became effective on November 5, 1953.

### *The Stipulation, Reservation, and Report*

The case was heard by a single justice upon the petition for appeal and the record on appeal. The latter

## NEW ENGLAND TELEPH. & TELEG. CO. v. DEPT. OF PUB. UTIL.

includes the transcript of testimony and exhibits before the department; and, by stipulation, additional documentary evidence pertinent to the company's operations during the nine months ending September 30, 1953, and modified findings of fact and amended orders made thereon by the department. Such evidence disclosed the effect of actual operations down to the date of the department's decision and tended to show that the earnings for the first nine months of 1953 were at the rate of 5.25 per cent. The amended orders permitted the company to file schedules of rates designed to yield gross revenues of \$2,927,350 in excess of those provided in the order of September 30, 1953, *supra*.

The single justice, at the request of the parties, reserved and reported the case without decision, such decree to be entered as might be appropriate under GL (Ter Ed) Chap 25, § 5, as amended.

### Issues

The company contends that the department's orders are confiscatory because (1) they do not permit the company to earn a reasonable return upon the fair value of its property; and because (2) on the prudent investment cost of capital theory adopted by the department (a) the company will not earn upon its investment the predicted return of 6.313 per cent; (b) the department used a hypothetical

debt ratio of 45 per cent instead of the actual ratio of 36.1 per cent in computing over-all cost of capital; and (c) the department disallowed as an expense of operation certain amounts actually paid by the company into its pension fund.

### *The Department's Original Decision*

The department adopted a rate base computed on original cost of plant less accrued depreciation, taking the company's book figures as such, and not merely as evidence of present value,<sup>2</sup> less certain deductions it saw fit to make. In so doing, the department excluded plant under construction, property held for future use, and cash working capital, the last on the ground that tax accruals are more than ample for the purpose.<sup>3</sup> It disallowed one half of the pension freezing payments so called, about which we shall have more to say later.

The average net intrastate investment appearing as the company's book cost has been steadily increasing. Some of the figures are: 1947, \$186,-882,000; 1951, \$247,436,000; 1952, \$255,709,000; and May 31, 1953, \$267,703,000. The company's estimates for two of the dates upon which the rates would be in effect were December 31, 1953, \$282,385,000, and December 31, 1954, \$305,086,000. The increase from 1947 to 1952 was about 37 per cent. If the estimated figure for the end of 1954 should be

<sup>2</sup>To borrow words of the department's brief: "It refused to toy with reproduction cost or cost indices and looked only to the original cost of the property as it appeared on the books of the utility. To query as to whether or not it was finding a 'value' by this process is a fruitless and unrealistic inquiry into pure semantics."

<sup>3</sup>The company considers that the department erred in excluding these items, but does not ask us to decide these questions. In an appendix to its brief, the company says, "Since these points are relatively unimportant in the decision of this case, we point them out here merely to show that the department eliminated actually existing investment as well as it failed to recognize known future investment."

## MASSACHUSETTS SUPREME JUDICIAL COURT

attained, the increase from 1947 would be about 63 per cent. The gross construction program of the company in Massachusetts appears from these figures: 1950, \$22,157,000; 1951, \$26,726,000; 1952, \$34,899,000; 1953 (estimated) \$41,000,000; and 1954 (estimated) \$44,400,000.

We quote from the decision of the department: "It is essential in order for respondent to be in position to furnish adequate service to the people of Massachusetts that this gigantic construction program be encouraged. In March, 1953, there were 22,154 orders for main station service held by respondent in Massachusetts awaiting facilities. In addition, there were 109,921 orders for regrades so held. . . . [A]lthough the company has been making some progress in reducing the number of held orders and regrades, the new demand is so substantial that it continues to have a very large number of such orders in its files at the end of each year. It is in large measure due to this situation that respondent is committed to such large capital expenditures in the immediate future. . . .

"The plant so being constructed is relatively expensive. At the end of 1951, the total plant in service per telephone was about \$258. During 1952, 52,945 new phones were added, and the gross book cost increased at the rate of \$382 per additional telephone. It is, in other words, retiring some relatively low cost plant and adding a great deal more new plant under present-day inflated costs." [*Supra*, 2 PUR3d at p. 475.] After criticiz-

ing the company for canceling its expansion plans in 1949 when the rates in effect were those held to be confiscatory in *New England Teleph. & Teleg. Co. v. Department of Public Utilities* (1951) 327 Mass 81, 88 PUR NS 73, 97 NE2d 509,<sup>4</sup> the department's decision continues: "[W]e believe in [it?] our duty to further its present expansion program as best we can for the benefit of the public. It is necessary, of course, in finding the appropriate rate base, to use one to which it is possible to relate an income statement. Under the prudent investment rule, which we have followed whenever possible, such figures, as well as the rate of return used in connection therewith, should be as nearly contemporary as possible. However, fair treatment of an earnings statement requires the use of a full year's figures in order to avoid seasonal distortion. The only earnings statements covering a full year which appear in evidence are those for the year 1952. We believe, therefore, that the proper rate base to use in these proceedings is the average net plant investment for the year 1952. We find the proper rate base as of such period to be \$250,-084,000, computed as follows:

Gross plant in service .....	\$384,240,000
Less depreciation reserve .....	136,756,000
Net plant in service .....	\$247,484,000
Plus materials and supplies .....	2,779,000
Average net investment .....	\$250,263,000
Less Charleston Plan correction <sup>5</sup>	179,000
Rate base .....	\$250,084,000

[*Supra*, 2 PUR3d at p. 476.]

<sup>4</sup> It was there stipulated that the composite return on the rate base resulting from the department's order would be 4.887 per cent if the company was not entitled to earnings on

reinvested surplus and 4.768 per cent if the company was so entitled. 327 Mass 81, 84, 85, 88 PUR NS 73, 97 NE2d 509.

<sup>5</sup> Adopted early in 1952 for the separation

NEW ENGLAND TELEPH. & TELEG. CO. v. DEPT. OF PUB. UTIL.

The department made certain modifications in the earnings as appearing in the books, the more important being to allow a full year's operation to a wage increase given the company's employees effective October 12, 1952, and to a rate increase effective July 24, 1952. It then computed the 1952 net earnings to be \$13,970,000, which would mean a return of 5.59 per cent on the rate base of \$250,084,000. The decision referred to estimates presented by the company that the then existing rates would yield net earnings for 1953 of \$14,076,000, or 5.17 per cent, on an average net investment of \$272,375,000, and for 1954 of \$14,747,000, or 5.01 per cent, on an average net investment of \$294,440,000. The estimates were dismissed with the statement: "However, the company did not pretend to do more than support its claim to increased rates by its future estimates, and all of the itemized data presented relate to 1952 results." [Supra, 2 PUR3d at p. 478.]

As to a substantial regulatory lag found to exist in this case, the decision commented: "It is unfortunate that this results, in a period of rising prices, in detriment to the utility and in balance sheet results which are less favorable than contemplated by the regulatory agency. It is to be observed, however, that in a period of falling prices, this process works in reverse, and it is usually some time before even the most diligent regulatory agency can be in a position to demand a corresponding decrease in rates." [At p. 478.]

The department made certain ex-

of that portion of the company's plant applicable solely to intrastate operations.

<sup>6</sup>The optimism engendered by this unspecified testimony had not been justified by the

pense modifications. It increased the figure for taxes by \$104,000, and decreased the amount of telephone expenses by \$192,000 representing one half of the company's actual payments into its pension fund, so called "pension freezing" payments, which the department found "should have been charged against operations in previous years, and are an improper charge against operations in 1952." [At p. 480.] The effect of these changes was to bring the net intrastate earnings under the then rates to \$14,058,-000, a return of 5.62 per cent on the rate base found.

To reflect the 1953 results so far as it had them, which was for five months, the department decreased this earnings figure to \$13,755,000, and used the reduced amount for the purpose of computing the increased revenues to which the company was entitled. The decision referred to testimony that the first five months normally would show better results than would the balance of the year, and that the third quarter is usually a poor earning period. These factors, however, were disregarded because of testimony that the "plant being added is of a nature which should tend to decrease operating costs at a more rapid rate than maintenance increases."<sup>6</sup> Also, because of testimony "regarding the earnings potentialities of the new plant," the department did not accept the company's estimates of earnings beyond 1953.

In the New England Telephone Case, *supra*, reported in 327 Mass at p. 91, 88 PUR NS at p. 80, 97 NE2d

time of the supplemental decision. The company contends that it was wholly without reliable foundation in the first place.

## MASSACHUSETTS SUPREME JUDICIAL COURT

at p. 515, the debt ratio was 62.1 per cent. As a result of security issues the debt ratio at the time of the decision in the present case was 36.1 per cent. On this subject the department declared: "We cannot find that the company's directors were acting capriciously or arbitrarily in establishing the existing corporate structure, or that they were exercising anything except their own best judgment of what is best for respondent, which doubtless is their primary duty as directors. On the other hand, we find that the company can operate without trouble on a 45 per cent debt ratio and that such debt ratio would not entail undue additional interest expense, nor would it interfere with the soundness of its debt or equity securities. We find such ratio to be adequately conservative for this type of utility. It is possible that the higher debt ratio might endanger the present high rating of its bonds, though we doubt it and in any event, we see nothing catastrophic

in such an eventuality. We find finally that full recognition of the interest of the ratepayers in respondent's capital structure demands that we adopt such debt ratio for the purpose of computing a fair rate of return." [2 PUR3d at pp. 486, 487.] The department found the cost of additional debt capital to the company to be 3.90 per cent, and the aggregate current cost of debt capital at a 45 per cent debt ratio to be 3.64 per cent. The decision prophesied that "a return of 8.5 per cent on the company's equity investment will yield it a fair return, and will be more than adequate to insure the attraction of the necessary additional equity funds which it will require." [At p. 493.] The department concluded that the following over-all rate of return will be fair and equitable, will maintain the company's credit, and enable it to obtain additional capital when needed to serve its public:

$$\begin{aligned} 45\% \text{ debt capital} \times 3.64\% \text{ net return} &= 1.638\% \text{ net return on whole capital} \\ 55\% \text{ stock or equity capital} \times 8.5\% \text{ net} \\ \text{return} &= 4.675\% \text{ net return on whole capital} \\ \\ \text{Composite net return on total of both} \\ \text{kinds of capital} &\dots \end{aligned}$$

---

6.313%

These figures are the same as the minimal nonconfiscatory rates found by us in the previous New England Telephone Case, *supra*, 327 Mass 81, 88 PUR NS 73, 97 NE2d 509, except for the actual cost of debt capital, which there was 3.45 per cent, and, of course, the total, which reflects that difference.<sup>7</sup> The net return on stock capital is at the exact rate which we

found barely not to be confiscatory in the earlier case where we said, 327 Mass at p. 96, 88 PUR NS at p. 83, 97 NE2d at p. 517: "In our opinion therefore a net return of less than 8.5 per cent on stock capital or less than 6.23 per cent on the sum of both kinds of capital is below the level where confiscation begins. It does not follow that a considerably higher return

<sup>7</sup> The department carried its computation to the third decimal point, and so its product of

55 times 8.5 per cent is 4.675 per cent instead of 4.68 per cent.

## NEW ENGLAND TELEPH. & TELEG. CO. v. DEPT. OF PUB. UTIL.

might not fall within the range of reason and might not have been allowed by the department, but our duty is performed by marking the line of confiscation." See Massachusetts Bonding & Ins. Co. v. Commissioner of Insurance (1952) 329 Mass 265, 270, 107 NE2d 807; Federal Power Commission v. Natural Gas Pipeline Co. (1942) 315 US 575, 585, 42 PUR NS 129, 86 L ed 1037, 62 S Ct 736.

### *The Department's Supplemental Decision*

The supplemental decision was dated January 6, 1954, 2 PUR3d 501, and contained these findings. The company had actively continued its construction program. Its investment account on September 30, 1953, was \$276,648,000, and the average for the nine months ending on that date \$269,564,000. The rate base found in the earlier decision should be raised to \$260,396,000. For the nine months ending September 30, 1953, revenues were \$106,378,000, expense \$80,567,000, and net earnings, after taxes and before interest, \$10,623,000. Modified by the rate increase allowed under the order of September 30, 1953, 2 PUR3d 464, net earnings would be \$12,198,000. However, depriving the company of the credits for interest charged during construction and disallowing one half of the "pension freezing" payments, the earnings for the nine months would "appear" as \$12,047,000, an amount, which, if annualized, would mean a return on a \$260,396,000 rate base of 6.17 per cent instead of the 6.313 per cent to

which the company was found to be entitled under the previous order. A "very large part of this effect" is due to increased operating costs. If applied to the nine months ending September 30, 1953, the wage increase of October 11, 1953, would raise expense \$1,515,000 and decrease net earnings \$710,000. The company is entitled to earnings of \$16,438,800 after taxes but before interest to achieve a return of 6.313 per cent, but under the rates filed as a result of the order of September 30th is earning only \$15,116,000. To increase net earnings by \$1,322,800, there must be a gross increase in revenues of \$2,927,350.<sup>8</sup> The order, accordingly, allowed increased gross annual revenues of \$7,446,800.

The supplemental decision referred to a "disconcerting fact" shown by the comparative earning statements for 1952 and 1953. On September 30, 1952, the company was operating 64.8 per cent of its stations in dial service at a traffic expense, consisting almost entirely of operators' wages, of \$23,043,000. On September 30, 1953, dial service covered 66.1 per cent of its stations, and traffic expense had increased to \$24,518,000. The department observed: "Some of this increase is doubtless due to a wage increase effective late in 1952, but it is disturbing to find that the conversion to dial service has so little effect upon respondent's operating wages. The natural assumption would be that its traffic expense would decrease and maintenance expense increase in proportion of the percentage of dial stations. . . . [I]t may be that the

<sup>8</sup> Chiefly because of federal income taxes it takes \$2,213 of revenues to net one dollar of earnings. In its decision the department stated that "out of every dollar of gross reve-

nue paid by telephone users in Massachusetts, about 14 cents went to pay taxes" [2 PUR3d at p. 482] of all kinds.

## MASSACHUSETTS SUPREME JUDICIAL COURT

effect of the dial conversion upon traffic expense is not reflected as promptly as might be expected. The facts do, however, . . . further substantiate the conclusion to which we arrived in our previous order that the increase in earnings which we are providing for herein should prove to be substantially higher than is indicated and there is or should be a correspondingly increased margin in net telephone earnings in the future." [*Supra*, 2 PUR3d at p. 504.]

### Rate Base

The company declares fair value to be the principal issue and makes the contention that Arts 10 and 12 of the Declaration of Rights of the Constitution of this commonwealth strike down an order of a rate regulating body which denies to a public utility the opportunity to earn a fair return on the value of the property used to render the service. This question, now presented to this court for the first time, expressly was left undecided in *Lowell Gas Co. v. Department of Public Utilities* (1949) 324 Mass 80, 94-96, 78 PUR NS 506, 84 NE2d 811, and *New England Teleph. & Teleg. Co. v. Department of Public Utilities* (1951) 327 Mass 81, 88, 89, 88 PUR NS 73, 97 NE2d 509.

We note that no point is made under the Constitution of the United States, where the contention seems to be answered in the negative by the majority opinion in *Federal Power Commission v. Hope Nat. Gas Co.* (1944) 320 US 591, 602, 603, 51 PUR NS 193, 88 L ed 333, 64 S Ct 281, which is, of course, of only persuasive value

as to our state Constitution. See *Re Opinion of the Justices* (1952) 328 Mass 679, 685-687, 95 PUR NS 210, 106 NE2d 259.

In *Donham v. Massachusetts Pub. Service Commission*, 232 Mass 309, 313, PUR1919C 880, 884, 122 NE 397, 399, appears the statement: "The rule established by the public service commissioners for their guidance in fixing rates in an earlier case and apparently intended to be followed by them in others, so far as applicable, is that under the Massachusetts law 'capital honestly and prudently invested must, under normal conditions, be taken as the controlling factor in fixing the basis for computing fair and reasonable rates,' and that 'such rates are to be allowed as will yield a fair return upon such investments.' Bay State Rate Case, 4 Mass PSC Rep 11, 12, PUR1916F 221."<sup>9</sup> Later in the opinion it was observed, 232 Mass at p. 315, PUR1919C at p. 886, 122 NE at p. 400: "The subject of rate making or rate revision by the legislature or by public officers established by legislative authority, has not been much discussed in the decisions of this court." This observation still holds true as to the topic presently under discussion. From our own reports, so far as we are aware, we need mention only two statements, the first in an advisory opinion, and the second in a self-professed dictum citing the first.

*In Re Opinion of the Justices* (1925) 251 Mass 569, 610, 147 NE 681, 700, relating to the constitutionality of a proposed compulsory motor vehicle insurance statute, it was

<sup>9</sup> For an impartial short critique of the Massachusetts so-called prudent investment theory down to 1941, see Barnes, "The Economics of Public Utility Regulation," 506-511.

NEW ENGLAND TELEPH. & TELEG. CO. v. DEPT. OF PUB. UTIL.

said: "A fundamental principle of rate making by public authority is that in general the rate so established must be sufficient to yield a fair return on the reasonable value of the property used or invested for doing the business after paying costs and carrying charges. Rates not sufficient to yield such return are unjust, unreasonable and confiscatory. That is the general rule." There was no citation of authority, and the precise point then under discussion was the need under the Constitution for a provision for judicial review of premiums to be established by the commissioner of insurance.

In Horton v. Attorney General (1929) 269 Mass 503, 509, 169 NE 552, 555, it was stated, "Reliance is placed in this connection on that part of Re Opinion of the Justices (1925) 251 Mass 569, found at pages 610, 611, 147 NE 681. It there was said in substance that, where rates to be charged for public utility service by private persons or corporations were regulated by public authority, provision must be made for judicial review of the rates so established to the end that they may be reasonable, yield a fair return upon the value of the property employed, after paying costs and carrying charges, and that final determination of such rates could not be vested in a public officer, as was expressly provided in the proposed bill then under consideration. What there was said, with ample citation of authoritative decisions, is now adopted and affirmed. That principle is not pertinent to the cases at bar." It will be noted that the phrase in the advisory opinion, "fair return on the reasonable value of the property used or

invested for doing the business," has become "fair return upon the value of the property employed." No great significance should be attributed to the variation, as the guiding influence in both undoubtedly was *Smyth v. Ames* (1898) 169 US 466, 42 L ed 819, 18 S Ct 418, and succeeding cases in its line.

[1] In this state of the authorities we shall not adopt at this relatively late date a construction of the Constitution of this commonwealth which compels the use of any particular theory or method or combination of theories or methods for determining a rate base. *Simpson v. Shepard* (Minnesota Rate Cases), 230 US 352, 434, 57 L ed 1511, 33 S Ct 729, 48 LRA NS 1151, Ann Cas 1916A 18; *Georgia R. & Power Co. v. Georgia R. Commission*, 262 US 625, 629, 630, PUR1923D 1, 67 L ed 1144, 43 S Ct 680; *New England Teleph. & Teleg. Co. v. State of New Hampshire* (1949) 95 NH 353, 357, 78 PUR NS 67, 64 A2d 9; *New England Teleph. & Teleg. Co. v. State of New Hampshire* (1953) 98 NH 211, 219, 99 PUR NS 111, 97 A2d 213; *Chesapeake & P. Teleph. Co. of Baltimore City v. Maryland Pub. Service Commission* (1952) 201 Md 170, 181, 182, 97 PUR NS 50, 93 A2d 249. We cannot read in the Declaration of Rights a mandate that either reproduction cost or original cost must be exclusively adopted in the regulation of rates of a public utility. We would not be justified in laying hold of any part of our fundamental law for the purpose of overriding the department merely because a particular approach to rate regulation was not used. It would not be helpful to discuss the

## MASSACHUSETTS SUPREME JUDICIAL COURT

opinions of the Supreme Court of the United States,<sup>10</sup> or of courts of last resort in other states, in many of the latter of which the language of some special statute forms the decisive component.

The department, citing the Hope Case, *supra*, points out that it considered what rate of return was necessary for the company to realize upon the rate base found, in order to maintain financial integrity, attract capital, and compensate investors for the risks assumed. See New England Teleph. & Teleg. Co. v. Department of Public Utilities (1951) 327 Mass 81, 94, 88 PUR NS 73, 97 NE2d 509; Bluefield Water Works & Improv. Co. v. West Virginia Pub. Service Commission, 262 US 679, 692, PUR1923D 11, 67 L ed 1176, 43 S Ct 675; Colorado Interstate Gas Co. v. Federal Power Commission (1945) 324 US 581, 605, 58 PUR NS 65, 89 L ed 1206, 65 S Ct 829. Between November 10, 1952, and January 10, 1953, the market price of the stock varied between 108 $\frac{1}{2}$  and 112 $\frac{1}{2}$ . At the time of the supplemental decision the stock was selling at about 116, which was what one of the company's witnesses testified that the market should be in order to enable the sale of new common stock at par \$100. More recent market quotations naturally are not in the record.

The company declared dividends at the rate of \$8 per annum for 1952. Its dividend rate had not been as high as \$8 since 1932. It paid \$7 in 1940 and

<sup>10</sup> In Federal Power Commission v. Hope Nat. Gas Co. (1944) 320 US 591, 51 PUR NS 193, 88 L ed 333, 64 S Ct 281, cited by the department in its decision six times, the court divided five to three with a concurring opinion by two justices and separate dissents by three. The prudent investment or original cost theory

1941, \$6.50 in 1936 and 1939, and \$6.25 in 1937. Otherwise it had never paid over \$6 since 1932. These findings appear in the decision along with a discussion of the company's success in recent new stock offerings.

[2] The "court, will not interfere with the exercise of the rate-making power unless confiscation is clearly established." New England Teleph. & Teleg. Co. v. Department of Public Utilities, *supra*, 327 Mass at p. 86, 88 PUR NS 73, 97 NE2d at p. 512, quoting from St. Joseph Stock Yards Co. v. United States (1936) 298 US 38, 53, 14 PUR NS 397, 405, 80 L ed 1033, 56 S Ct 720.

We are far from saying that the course followed by the department in the present case would meet constitutional requirements in every other. Our holding is that in the present case confiscation is not clearly established.

### Debt Ratio

[3, 4] In the previous New England Telephone Case company revenues were to be determined in a setting where the debt ratio was admittedly too high. As above noted, the debt ratio was 62.1 per cent, the company advocated reduction to 35 per cent, and the department approved rates after finding that a debt ratio of 45 per cent would be reasonable. In rejecting the contention that the question was exclusively one of management for the company, we said, 327 Mass at p. 91, 88 PUR NS at p. 80, 97 NE2d at p. 515, that "we are not

followed by the department received its impetus in a concurring opinion of Mr. Justice Brandeis in which Mr. Justice Holmes joined. Missouri ex rel. Southwestern Bell Teleph. Co. v. Public Service Commission of Missouri, 262 US 276, 289, PUR1923C 193, 67 L ed 981, 43 S Ct 544.

NEW ENGLAND TELEPH. & TELEG. CO. v. DEPT. OF PUB. UTIL.

prepared to say that the refusal of the department to adjust its rates to a reduction in the debt ratio all at once under particularly adverse conditions from the high point of 62.1 per cent to an ideal ratio of 35 per cent or lower and the department's adoption of the figure of 45 per cent were in themselves unlawful or confiscatory."

In the present case the question arises in different form. The debt ratio has been cut by management to 36.1 per cent. With reduction an accomplished fact, the department has, nevertheless, allowed rates as before upon an assumed debt ratio of 45 per cent. The company insists that there is interference with the prerogatives of management. The department, on the other hand, presses the argument that the company acted "in flagrant and contumacious disregard of the expressed opinion of the department." We agree with neither. As a matter of internal management, the company's directors had the right to determine upon the reduction in indebtedness. Indeed, the department's very decision declares that the primary duty of the directors was to exercise their own best judgment of what was best for the company, and intimates by indirection that they did so. The directors did not have to abdicate their own business judgment and to ingest the department's opinion or else be denounced as contumacious. But, as pointed out in the previous case, 327 Mass at pp. 90, 91, 88 PUR NS at pp. 79, 80, 97 NE2d at pp. 514, 515, debt structure and the percentages of debt and equity capital enter vitally into the determination of the amount which the consuming public should pay. A 35 per cent debt ratio might be deemed

in the nature of a company luxury not to be reflected in rates to be charged the public. In any event, the department could think so without our being able to adjudge that there is anything unlawful or confiscatory about its position.

Our conclusion has the support of all court decisions discussing the subject which have come to our attention. Chesapeake & P. Teleph. Co. of Baltimore City v. Maryland Pub. Service Commission (1952) 201 Md 170, 189, 190, 97 PUR NS 50, 93 A2d 249; New England Teleph. & Teleg. Co. v. State of New Hampshire (1953) 98 NH 211, 220, 99 PUR NS 111, 97 A2d 213; Re New England Teleph. & Teleg. Co. (1951) 116 Vt 480, 502-504, 90 PUR NS 414, 80 A2d 671. The practice of rate-regulating authorities is in accord.

*Pension Freezing Payments*

[5, 6] In 1913 the company established a noncontributory pension plan, which until 1927 was financed on a pay-as-you-go basis, the amounts actually paid out to pensioners being charged to expense without advance funding. The plan is similar to others throughout the Bell System. On October 1, 1927, the financing was put on an accrual basis, the accruals commencing, as a transitional step, at the end of each employee's fifteenth year of service. At the same time the company provided that the amounts accrued should be placed in an irrevocable trust fund with a New York bank as trustee. On January 1, 1929, the company adopted the full service basis of accrual, and thereafter used accrual rates adequate to distribute

## MASSACHUSETTS SUPREME JUDICIAL COURT

pension costs as a level percentage of payroll over the full period of employee service. As there naturally were many employees of many years service, the accruals to the fund did not suffice to meet the full cost of future payments to pensioners. The amount by which accruals plus the fund fail to meet the cost of future pensions is the unfunded actuarial reserve requirement. The fund will be inadequate unless payments are made into it to compensate for the lack of earnings from the unfunded reserve. In 1937 the company took a final step in the development of its accrual program. Since then the fund has been financed upon the modified remaining cost basis. As of April 1, 1937, the company determined the amount of the unfunded actuarial reserve requirement, which was regarded as frozen at that figure. To insure the integrity of the plan, payments, called freezing payments, are made into the fund equal to the income which the unfunded reserve would earn were it an actual fund available for investment.

The foregoing is, for the most part, a partial summary of the testimony of one Stevenson, an actuary for the company, who was the only witness to testify on this complicated subject. The statements in it, which are needed as a basis for discussion, we believe to be undisputed and to have been assumed in the very short discussion of pension freezing payments in the decision. All that there appears is that in the previous proceedings, which came before us on other questions in (1951) 327 Mass 81, 88 PUR NS 73, 97 NE2d 509, the department disallowed as an expense one half of such payments; that its decision in those

6 PUR 3d

proceedings outlined the history of the pension plan; that the department there found that the pension accruals were excusably on an actuarially unsound pay-as-you-go basis from 1913 to 1927, but that there was not the same excuse for failure to prevent an increase in the unfunded actuarial reserve requirement between 1927 and 1940;<sup>11</sup> that the testimony in the present proceedings is practically the same as before; that freezing payments in 1952 amounted to \$384,000; and that \$192,000 "represents funds which should have been charged against operations in previous years, and are an improper charge against operations in 1952."

The reference to the findings made in the previous proceedings does not make them part of the present record. But a reading of them would confirm our conclusions reached on this record. The department has not indicated any evidence upon which it relied. The disallowed fraction of one half is an obvious arbitrary selection.

Whether there is evidence warranting a finding of the department is a question of law in appeals under GL (Ter Ed) Chap 25, § 5, as amended. A. B. & C. Motor Transp. Co. v. Department of Public Utilities (1953) 329 Mass 719, 722, 99 PUR NS 214, 110 NE2d 377. We shall treat the department's finding as measuring up to the bolder restatement in its brief, that "the company was inexcusably lax in arriving at its final and sounder conclusion." But there is nothing in Stevenson's testimony, or elsewhere in the evidence that we can discover, to support that finding, or to support a finding that the company forceably

<sup>11</sup> The latter date must be in error for 1937.

NEW ENGLAND TELEPH. & TELEG. CO. v. DEPT. OF PUB. UTIL.

should have acted earlier, or that, judged by contemporary standards, its conduct was unreasonable, an abuse of discretion, or even only poor judgment. On this record the allowance of only one half of the pension freezing payments as an expense was an error of law and must be modified by allowing the deduction of the full amount.

This identical question has arisen in courts of other states, and has been uniformly decided contrary to the view adopted by the department. Re New England Teleph. & Teleg. Co (1951) 116 Vt 480, 488, 489, 90 PUR NS 414, 80 A2d 671; City of Pittsburgh v. Pennsylvania Pub. Utility Commission (1952) 370 Pa 305, 316-323, 94 PUR NS 353, 88 A2d 59; Alabama Pub. Service Commission v. Southern Bell Teleph. & Teleg. Co. (1949) 253 Ala 1, 36-39, 84 PUR NS 221, 42 So 2d 655; Southern Bell Teleph. & Teleg. Co. v. Georgia Pub. Service Commission (1948) 203 Ga 832, 847-851, 874, 875, 75 PUR NS 471, 49 SE2d 38; City of Columbus v. Ohio Pub. Utilities Commission (1950) 154 Ohio St 107, 134, 135, 86 PUR NS 496, 93 NE2d 693; Re Northwestern Bell Teleph. Co. (1950) 73 SD 370, 391, 392, 85 PUR NS 368, 43 NW2d 553; State ex rel. Pacific Teleph. & Teleg. Co. v. Department of Public Service (1943) 19 Wash2d 200, 259, 52 PUR NS 6, 142 P2d 498.

[7] We are not impressed with the argument of the department that \$192,000 is so "insignificant" in comparison with other figures in this case that an error of this amount should be overlooked. If relative smallness of sum has any significant bearing, it seems to us to show that there is no unfairness to consumers in omitting

to strip the company of the benefit of one half of this item of expense. The suggestion that the department might have found that the company was entitled to a lower revenue than it did find does not merit lengthy discussion. These rate cases are protracted enough and present questions enough on the facts which the department finds, or which it is the duty of the department to find, without stretching the scope of appeal to embrace consideration of other inconsistent facts which it is argued might have been found but which were not.

*Probable Failure to Earn Allowed Rate of Return*

[8] The company complains that 6.313 per cent, the rate to which it has been found to be presently entitled, clearly cannot be earned during the foreseeable effective period of the ordered rates. Recalling its recent unsatisfactory experience in trying to earn rates of return allowed in decisions of the department, it outlines the grievance that for the last three years, instead of the 6.23 per cent purportedly allowed by the department pursuant to our order in the previous case, actual earnings have been but 5.51 per cent, 5.44 per cent, and 5.25 per cent, respectively. The department's decision does not contain these figures, but the main contention is not effectively disputed. Indeed, the brief of the department offers this explanation: "The company's failure to realize the full benefit of the department's past orders is due almost entirely to the familiar detriment suffered by all regulated industries in times of rapidly rising costs." The reference is to "erosion" or "attrition" of the rate of

## MASSACHUSETTS SUPREME JUDICIAL COURT

return which was defined in the decision in these words: "This terminology has been used to describe the tendency of the rate of return to diminish in a period of comparatively high construction costs, since new plant is being added which, as we have already found, is relatively expensive per telephone station. As the high cost plant comes into service, it tends to increase the applicable rate base at a more rapid pace than the resultant earnings, and the rate of return decreases accordingly." [2 PUR3d at p. 482.] See "Original Cost Rate Regulation and Inflation," 66 Harv L Rev 1274. The department's brief concedes that the "current inflation was in full swing by 1951," and that "[t]he economic situation today is no different from that which was current in 1951, except in degree." Since the contrary could hardly be asserted, there can be no solace for the company in the statement from the decision quoted earlier in the opinion, at p. 69, that "in a period of falling prices, this process works in reverse." With no finding of any prospect of falling prices or no serious suggestion of evidence that might warrant such a finding, these considerations are without weight in dealing with the realities of this case.

The department's decision contains this apt statement: "It is self-evident that the more nearly an order of this nature comes to being based on contemporary data, the more nearly exact justice is done to the utility and the

further away is another rate case."<sup>12</sup> [2 PUR3d at p. 483.] Nearly a year has elapsed since the department's original decision and nearly nine months since the supplemental decision. We think that the findings reveal that the company's fears that it will not earn the allowed rate of return are well founded. We are much impressed that, from a consideration of the company's figures for the first nine months' operations in 1953, the department's supplemental decision raised the rate base the equivalent of over a million dollars a month. We are of opinion that if the company's construction program has proceeded as planned, and as revealed in both the decision and the supplementary decision, the rate base must be raised as of a date or dates to reflect a demonstrated substantially increased investment, to the end that the company may conduct its operations with the allowed revenue more nearly based upon contemporary data. Where the regulatory line is drawn close to the border marking the area of confiscation, there is danger that only slight change in economic conditions will cause a drop below the minimum lawful return, as would even a slight miscalculation of the regulatory body. The department, of course, denies that such is this case.<sup>12</sup>

### *Recommittal*

The occasion seems appropriate to recommit the case to the department to review its findings in accordance

<sup>12</sup> The department says in its decision: "We are of the opinion that the rate of return to which we have arrived is far from conservative and represents substantially more than a 'bare bones' cost of capital." [2 PUR3d at p. 493.] The last-mentioned term is defined

in its brief as "signifying a result in the estimation of which no allowance has been made for a safety factor, and where reasonable doubts have been resolved in the direction of a lower result."

**NEW ENGLAND TELEPH. & TELEG. CO. v. DEPT. OF PUB. UTIL.**

with this opinion and in the knowledge of intervening experience. Lowell Gas Co. v. Department of Public Utilities (1949) 324 Mass 80, 89, 78 PUR NS 506, 84 NE2d 811; Re Opinion of the Justices (1952) 328 Mass 679, 690, 95 PUR NS 210, 106 NE2d 259. More is now known of the progress of the construction program, and of company revenues and expenses. A chance is afforded to shorten the period of forecast, and at the same time to observe whether the department or the company has been more nearly correct in estimating the rate of return which would be earned. There will likewise be an opportunity to observe more about labor costs under the dial system. There will be no occasion to rely upon 1952 as a "test year," as stressed by the department and as strongly protested by the company.<sup>13</sup>

<sup>13</sup> Strictly speaking, we should expect a test year to be under proposed rates and not under predecessor rates. See concurring opinion of Mr. Justice Brandeis in State of Mis-

souri ex rel. Southwestern Bell Teleph. Co. v. Missouri Pub. Service Commission, 262 US 276, 291, 292, PUR1923C 193, 67 L ed 981, 43 S Ct 544.

Extended hearing should not be necessary. Precedent is found in the stipulated evidence at the hearing before the single justice. Examination of the entries in the company's books of account subsequent to September 30, 1953, should provide all or nearly all that is necessary in the way of additional evidence. In the meantime the stay granted by the single justice subject to refunding bond will stand.

**ORDER**

In view of the foregoing, it is ordered that the case be recommitted to the department of public utilities to review its findings in accordance with this opinion. The stay granted by the single justice subject to refunding bond will stand.

So ordered.

**WISCONSIN PUBLIC SERVICE COMMISSION**

**Welnitz Brothers et al.**  
*v.*  
**North-West Telephone Company**

Additional Defendants: Central Green Lake Telephone Cooperative,  
General Telephone Company of Wisconsin

2-U-4288  
October 1, 1954

**R**EQUEST by farm operators for service from different telephone company than one previously serving area; request partially granted.

## WISCONSIN PUBLIC SERVICE COMMISSION

### *Service, § 445 — Telephone exchanges — Customer preference.*

1. The request of several of farm operators for telephone service from an exchange other than the one which previously served their area was granted in part where it appeared that all of their business and social relationships were centered in the exchange from which they desired service, p. 80.

### *Service, § 445 — Foreign exchange telephone service.*

2. Two telephone companies and a co-operative were ordered to participate in rendering foreign exchange service to two farm operators desiring service from an exchange other than the one which had served the previous owners of the farms, where most of the business and social interests of the farmers were in the community in which the exchange from which they requested service was located, and where direct service did not appear to be warranted because of the possibility that upon the farms again changing hands, service would once again be requested of the original exchange, p. 80.

### *Rates, § 105 — Commission authority — Telephone service — Foreign exchange.*

3. The commission has authority to require the filing of a foreign exchange rate where, under the particular circumstances involved, such filing would enable the utilities involved to furnish reasonably adequate service as required by the statute, p. 82.

By the COMMISSION: William Welnitz for Welnitz Brothers and Milan Moderow on April 9, 1954, filed with the commission a copy of a letter sent to the Ripon exchange of the North-West Telephone Company asking it to waive objection to an extension of telephone service from Markesan. The petitioners asked service either direct from General Telephone Company of Wisconsin which operates the Markesan exchange or from the Central Green Lake Telephone Cooperative which is switched at the Markesan exchange. They do not want Ripon service. Correspondence with the telephone companies involved indicated that an agreement could not be reached so the commission deemed that good cause existed for an investigation and hearing.

Pursuant to due notice hearing was held at Markesan on August 19, 1954, before examiner Rolfe E. Hansson.

6 PUR 3d

APPEARANCES: Petitioners, by Emery Paul, Attorney, Markesan; North-West Telephone Company, by L. R. Gilbertson, General Manager, Tomah; Central Green Lake Telephone Cooperative, by Harry H. Gallert, Secretary and Treasurer, Markesan; General Telephone Company of Wisconsin, by Donald W. Busse, General Commercial Superintendent, Madison.

Of the commission staff: K. J. Jackson, rates and research department.

### *Opinion and Findings of Evidentiary Fact*

[1, 2] The petitioners operate farms located in section 15, town of Green Lake, Green Lake county. William Welnitz and his two brothers own their farm of 160 acres which is located in the northeast quarter of the section. Milan Moderow rents the Richard Bloedel farm which is located

## WELNITZ BROTHERS v. NORTH-WEST TELEPH. CO.

in the southeast quarter of the section. Moderow recently purchased a farm adjoining the Bloedel farm to the west but expects to continue to live at his present location. The Welnitz Brothers acquired their farm in 1946; Milan Moderow has occupied the Bloedel farm for the past thirteen years. Neither petitioner has ever had telephone service. The former owner of the Welnitz farm had Ripon exchange service for twenty years prior to November, 1946. Ripon service was also installed at the Moderow premises prior to the early 1930's.

The area is about  $8\frac{1}{2}$  miles from Ripon and 7 miles from Markesan. The North-West Telephone Company has facilities, though dilapidated, that terminate at the Welnitz premises and that are within about one-fourth mile from Moderow. Central Green Lake Telephone Cooperative has a circuit which terminates less than one-half mile west of Moderow and somewhat in excess of one-half mile from Welnitz. General Telephone Company facilities in the area are about one mile south of Moderow and in excess of one mile from Welnitz.

General Telephone Company of Wisconsin has on file with the commission an exchange area boundary-line map for its Markesan exchange designated P. S. C. of W. No. 1, Sheet No. 2, Amendment No. M-39 which shows the Welnitz and Moderow premises to be in territory served by the North-West Telephone Company. The exchange boundary line between the North-West Telephone Company and the Central Green Lake Telephone Cooperative is less than one-fourth mile west of the Welnitz and Moderow premises. The terri-

tory to be served by General Telephone Company of Wisconsin as designated on the map is about  $1\frac{1}{2}$  miles south of the Moderow premises.

Practically all of Welnitz Brothers and Milan Moderow's business and social relationships are centered in Markesan. North-West Telephone Company takes the position that the petitioners should receive service from Markesan if they so desire but on a foreign-exchange basis. General Telephone Company of Wisconsin concurs in the position of North-West Telephone Company but considers that Central Green Lake Telephone Cooperative should participate in providing such service as their operating area is immediately adjacent to that of the North-West Telephone Company. They take this position because they would be required to construct facilities through the operating area of Switched Line No. 57F if they were to participate in rendering foreign-exchange service.

Central Green Lake Telephone Cooperative objects to furnishing Markesan exchange service to the petitioners by means of its facilities either directly or upon a foreign-exchange basis. They do not desire to serve any other than their present subscribers.

The commission is of the opinion that the petitioners are entitled to Markesan service. The remaining question to be decided is whether such service should be on a direct or foreign-exchange basis and if on a foreign-exchange basis whether Central Green Lake Telephone Cooperative or General Telephone Company of Wisconsin should participate with North-West Telephone Company in providing such service.

## WISCONSIN PUBLIC SERVICE COMMISSION

Service upon a direct basis is not warranted at this time. Both the Welnitz and Moderow premises have been served from Ripon in the past; and if they change occupants in the future, such service may be desired again. It is considered that the service requested herein is desired to meet the particular convenience of two potential customers. Foreign-exchange service is designed to take care of these situations and should be so used.

Central Green Lake Telephone Cooperative and North-West Telephone Company should provide the facilities necessary to render foreign-exchange service. It appears unreasonable to require the General Telephone Company of Wisconsin to provide facilities because they would have to construct such facilities through the operating area of Switched Line No. 57F. General Telephone Company is not adjacent to the exchange boundary line between Ripon and Markesan in this area. On the other hand, Central Green Lake Telephone Cooperative is directly adjacent and could provide facilities on the most direct route and with the least amount of construction.

[3] North-West Telephone Company has on file with the commission a foreign-exchange-service tariff which outlines the rates, rules, and regulations during which such service will be established. Central Green Lake Telephone Cooperative does not desire to concur in such tariff. The commission in (Wichman v. Wood County Teleph. Co. [1952] 37 Wis PSC 112, 120, 95 PUR NS 193, 199) stated: "The commission considers that it has the authority to require the filing of a foreign exchange rate where under the particular circumstances in-

volved such filing will enable the utilities involved to furnish the reasonably adequate service required by the statutes."

### *Findings of Ultimate Fact*

The commission finds:

1. That North-West Telephone Company, Central Green Lake Telephone Cooperative, Switched Line No. 57F, and General Telephone Company of Wisconsin own and operate plant and equipment furnishing telephone service to the public in the town of Green Lake, Green Lake county, and that Welnitz Brothers and Milan Moderow reside in said town.

2. That public convenience and necessity and the furnishing of reasonably adequate service to the petitioners, Welnitz Brothers and Milan Moderow, require that they be furnished telephone service from the Markesan exchange of the General Telephone Company of Wisconsin on a foreign-exchange service basis by means of facilities to be provided by the North-West Telephone Company and Central Green Lake Telephone Cooperative, and that to this end Central Green Lake Telephone Cooperative be required to concur in the presently filed foreign-exchange tariff of North-West Telephone Company.

The commission concludes:

That it has authority under §§ 196.03, 196.26, 196.37, and 196.58, Statutes, to issue an order in accordance with the foregoing findings of fact.

### ORDER

The commission therefore *orders*:

1. That Central Green Lake Telephone Cooperative be and hereby is

WELNITZ BROTHERS v. NORTH-WEST TELEPH. CO.

directed within thirty days from the date of this order to file with this commission a concurrence in the provisions of the presently filed foreign-exchange-service tariff of North-West Telephone Company.

2. That North-West Telephone Company and Central Green Lake Telephone Cooperative extend telephone service from Markesan to the

premises of Welnitz Brothers and Milan Moderow in section 15, town of Green Lake, Green Lake county, on a foreign-exchange-service basis with such service being extended within ninety days after the petitioners have complied with the provisions of said foreign-exchange-service tariff with respect to contributions in aid of construction.

---

CALIFORNIA PUBLIC UTILITIES COMMISSION

Re San Miguel Interurban Telephone  
Company

Decision No. 50626, Application No. 35372  
October 5, 1954

**A**PPLICATION by telephone company for authority to increase rates, abandon telegraph service, discontinue certain telephone service, and substitute toll station service for exchange service; approved.

*Rates, § 143 — Increase — Operation at a loss — Telephone company.*

1. A telephone company should be allowed to increase its rates where the company is presently operating at a loss, p. 86.

*Service, § 276 — Telephone company — Discontinuance of small exchange — Substitution of toll service.*

2. A telephone company should be allowed to discontinue service at a small exchange operated at a loss and transfer present subscribers and farmer lines to toll station service, provided the company supply a necessary additional circuit before undertaking such transfer, p. 87.

*Service, § 274 — Abandonment — Telegraph.*

3. A telephone company should be authorized to abandon telegraph service where no present demand for such service exists, p. 87.

APPEARANCES: O. H. Ivey, President, and F. V. Rhodes, for applicant; California Farm Bureau Federation, by J. J. Duel and Eldon Dye, Cali-

fornia Independent Telephone Association, by Frank V. Rhodes, interested parties; Neal C. Hasbrook, for the commission staff.

## CALIFORNIA PUBLIC UTILITIES COMMISSION

By the COMMISSION:

### *Nature of Proceeding*

San Miguel Interurban Telephone Company, a California corporation, by the above-entitled application filed April 21, 1954, seeks an order of this commission authorizing a general increase in its rates for telephone service, authority to abandon telegraph service over its own lines, authority to discontinue exchange service in its Parkfield exchange and to substitute toll station service therefor.

### *Public Hearing*

A public hearing in this proceeding was held before examiner Emerson on September 13, 1954, at San Miguel. Twelve witnesses were heard and two primary exhibits were received. Approximately twenty-four of applicant's subscribers were in attendance, about ten being from the Parkfield area.

### *Applicant's Position and Request*

Applicant alleges that its present financial situation, wherein it is operating at an out-of-pocket loss, is so precarious as to warrant immediate and emergency rate relief. It attributes such situation, primarily, to the closing of the U. S. Army Military Reservation "Camp Roberts" on September 30, 1953, and the resulting loss of business to the community of San Miguel and to itself. Applicant's records show that within five months following the loss of Camp Roberts, its toll revenues had dropped more than 41 per cent and that it had suffered the loss of many subscribers due to the closing of business houses in the town and the departure of resi-

dents who had made their livelihood by serving the camp and Army personnel. As an example of the latter, applicant cites the loss of 64 subscriber stations in the first three months and 23 stations in the next five months of 1954. Such decline in toll and exchange business on a telephone system of only about 300 stations has reduced its revenues to a point well below its expenses of operation. According to applicant, it cannot long sustain such deficit operations and remain in business.

Applicant claims to have made all economies of which it is capable and still has been unable to arrest the trend of its worsening financial situation. Not knowing where else to turn it requests that this commission, under the broad powers delegated to it by § 701 of the Public Utilities Act,<sup>1</sup> determine the best and most satisfactory manner of serving applicant's territory and to authorize rates which will offset applicant's operating expenses. Applicant stands ready and willing to pursue any course of action which this commission may find to be in applicant's and the public's best interest and prays that the commission give it such relief as the commission may determine is warranted. Applicant's basic rates have remained unchanged since about 1912.

In compliance with this commission's rules of procedure, applicant set forth in its application specifically proposed rates for future service. It selected such rates from the tariffs of other utilities who offer like services in exchanges of similar size. After

or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction."

<sup>1</sup> Section 701 reads as follows: "The commission may supervise and regulate every public utility in the state and may do all things, whether specifically designated in this part

## RE SAN MIGUEL INTERURBAN TELEPH. CO.

such selection it found that the revenues which might be produced therefrom would still not offset its expenses, even excluding any provision for depreciation and the payment of taxes. It did not subsequently amend its application, however, but instead relied upon its prayer that it be made whole.

### *Applicant's Operations, Present and Proposed*

Applicant now offers exchange telephone service in two exchanges, San Miguel and Parkfield, geographically contiguous but whose centers are separated approximately 25 miles and connected by only one toll telephone circuit.

Manual common battery exchange service is provided in San Miguel to a total of 271 stations and magneto exchange service in Parkfield to a total of 33 stations. The company provides toll telephone and telegraph services over its own toll line between San Miguel and Parkfield. Toll telephone service to other points is furnished through connection with facilities of The Pacific Telephone and Telegraph Company. Telegraph messages to other points are referred to the nearest Western Union Telegraph Company office. Limited hours of regular service are provided, with emergency service available during night and Sunday off hours.

Under present operations a charge of 50 cents is made for each "emergency" call placed between the hours of 9 P.M. and 5:30 A.M. According to applicant such charge produces little revenue, is a source of annoyance to telephone users, does not control or avoid the necessity for operator attention to after-hour calls, and is

considerably detrimental to maintaining good public relations. Applicant desires to provide 24-hour service and thus eliminate the special charge and resulting difficulties.

As of the date of hearing, there were seven regular employees on the company's payroll on either a full-time or part-time basis, including the company officers. The president and vice president of the company normally perform all construction and maintenance work. Additional maintenance help is hired from time to time on a temporary basis. Commercial operations are performed by one employee in addition to the officers who perform multiple functions. The traffic force consists of four operators whose wages total \$680 monthly. At San Miguel the force consists of two regular operators and one relief operator. The fourth operator handles all traffic at the Parkfield board.

Exchange service in the Parkfield area has been rendered at an out-of-pocket loss for a number of years, due primarily to the necessity of maintaining a full-time operator in the area, and secondarily, because of the distance and resulting time required to perform maintenance work so far from the company headquarters in San Miguel. The single circuit to Parkfield is in only fair condition and requires major rehabilitation, including reconductoring and the setting of many poles. Applicant's estimate of the cost of such work totals between \$17,000 and \$20,000 with about 50 per cent of such cost representing materials. In view of such situation applicant proposes to discontinue all exchange service at Parkfield and to serve the area on a toll station basis

## CALIFORNIA PUBLIC UTILITIES COMMISSION

out of the San Miguel central office. Under this arrangement the present exchange stations and farmer line stations would be directly connected to the toll lead. It is clear from the evidence, however, that at least one additional circuit would be necessary in order to handle present Parkfield traffic and further that repeaters would be required in order to assure adequate transmission quality. It is possible that installation of "carrier" equipment may most adequately serve this area and applicant should immediately explore its feasibility.

### *Results of Operations*

Applicant and the commission staff presented exhibits and testimony detailing the results of applicant's operations for the years 1952 and 1953 together with similarly detailed estimates for the year 1954.

It is clear from the evidence that the accounting records of applicant do not conform with the system of accounts prescribed by this commission and are deficient or erroneous in numerous respects. Applicant's showing was based upon such records and is summarized as follows:

Applicant's Showing			
Item	Present Rates		
	Actual Year 1953	Est. Year 1954	
Operating Revenues ...	\$21,628.09	\$15,500.23	
Operating Expenses			
Before Taxes and Depreciation .....	20,668.27	25,631.00	
Taxes .....	393.09	782.30	
Depreciation .....	624.57	693.75	
Total Operating Expenses .....	21,685.93	27,107.05	
Net Revenue .....	(57.84)	(11,606.82)	
	(Red Figure)		

6 PUR 3d

An accountant of the commission staff analyzed all available records of applicant and, with an engineer of the staff, made correcting adjustments to applicant's figures and developed properly detailed accounts and estimates. These are set forth in Exhibit No. 1 in this proceeding.

In view of the evidence we find that the following summary, taken from the staff's exhibit, represents the best available analysis of the results of applicant's operations for the periods shown. The results shown under "Estimated Year 1954" are based upon the number of telephone stations in service on May 24, 1954. Since that date applicant has lost twenty-three subscribers, hence the estimated loss will be somewhat greater than that shown.

### Staff Analysis

Item	Present Rates	Adjusted Year 1953	Est. Year 1954
Operating Revenues			
Local Service .....	\$ 7,950	\$ 7,150	
Toll Service .....	14,740	8,370	
Miscellaneous .....	370	370	
Uncollectibles .....	(120)	(80)	
Total Revenue .....	22,940	15,810	
Operating Expenses			
Maintenance .....	5,920	6,600	
Operation .....	14,490	13,300	
Subtotal .....	20,410	19,900	
Depreciation .....	1,660	1,740	
Taxes .....	585	775	
Total Operating Expenses .....	22,655	22,415	
Net Revenue .....	285	(6,605)	
	(Red Figure)		

### Conclusions

[1] It is clear that applicant is presently operating at an out-of-

## RE SAN MIGUEL INTERURBAN TELEPH CO.

pocket loss and is in need of increased revenues. Further, the evidence indicates that, even under the full year effect of the proposed rates attached to its application, applicant would sustain a loss in excess of \$2,300 during 1954.

It is fundamental that a utility may not be forced to operate at a loss. Under the particular situation now affecting the communities served by applicant, applicant can expect no more than to have its revenues equal its expenses without hope for a return on its investment. The record is clear that there is a need and demand for 24-hour telephone service in applicant's territory and that present subscribers are not opposed to a substantial increase in rates under the circumstances recited herein. It appears in the public interest that telephone service not be curtailed in the area.

[2] With respect to serving the Parkfield area we conclude that applicant should be permitted to discontinue exchange service and transfer present subscribers and farmer lines to toll station service. However, applicant will be required to supply at least one additional circuit to Parkfield before undertaking such transfer.

In view of the entire evidence we conclude that applicant is entitled to increased revenues, based upon the 1954 level of business, of approxi-

mately \$8,940 so as to meet its reasonable operating expenses under the service conditions which will obtain from the mode of operation herein ordered. Such increased revenues will produce the following results of operations:

Operations Under Authorized Rates (Based upon 1954 Level of Business)	
<b>Operating Revenues</b>	
Local Service .....	\$15,750
Toll Service .....	8,160
Miscellaneous .....	370
Uncollectibles .....	<u>(120)</u>
Total Revenue .....	24,160
<b>Operating Expenses</b>	
Maintenance .....	6,600
Operation .....	15,020
Depreciation .....	1,730
Taxes .....	810
Total Expenses .....	24,160

(Red Figure)

[3] The record is clear that there is no present demand for telegraph service over applicant's own lines. Applicant will be authorized to withdraw such service.

Applicant will be required to file a set of rules governing present-day practices and relationships with its subscribers.

### Authorized Rates

Basic monthly rates and charges authorized herein, segregated to principal classes of service and compared with present rates and charges, are as follows: [Schedule omitted.]

MISSOURI PUBLIC SERVICE COMMISSION

MISSOURI PUBLIC SERVICE COMMISSION

Re Missouri Public Service Company

Case No. 12,937  
October 28, 1954

**A**PPLICATION by natural gas company for authority to increase rates; increase authorized.

*Rates, § 146 — Increase — Gas company — Higher supply cost.*

1. A natural gas company should be authorized to increase its rates in order to offset the increased cost of gas purchased from its supplier, p. 90.

*Return, § 101 — Natural gas company.*

2. A return of 6.09 per cent was deemed adequate for a natural gas company, p. 90.

APPEARANCES: A. Z. Patterson, Kansas City, for the company; John W. Coots, City Attorney, for the city of Weston; Otha Rawlings, City Attorney, for the city of Marshall; David R. Clevenger, Platte City, for the city of Platte City; William Aull, City Attorney, for the city of Lexington; Dick B. Dale, City Attorney, for the city of Henrietta; A. V. McCalley, City Attorney, for the city of Richmond; Thomas A. Johnson, General Counsel, and James M. England, Chief Accountant, for the commission.

By the COMMISSION: The Missouri Public Service Company, hereinafter sometimes referred to as "applicant," on August 18, 1954, filed revised tariff sheets containing proposed increased rates for gas service rendered by it to its natural gas customers in the state of Missouri, said increased rates being sought because of the then impending increased cost

of gas to be purchased by applicant from its supplier, Cities Service Gas Company.

The proposed increased rates being substantially higher than those in effect, the commission was of the opinion that it should require a hearing relative to their propriety. The commission on September 1, 1954, issued an order setting this matter for hearing before the commission in Jefferson City, Missouri, on October 6, 1954. On September 7, 1954, a suspension order was issued suspending the proposed increased rates for a period of 120 days beyond September 23, 1954, the effective date requested by applicant, unless otherwise disposed of by the commission.

On October 6, 1954, a hearing in this proceeding was held as above stipulated, such hearing then being continued to October 21, 1954, at which time further evidence was received. Appearances were as noted above and at the conclusion of the continued

## RE MISSOURI PUBLIC SERVICE CO.

hearing the cause was submitted on the record.

### *Findings of Fact*

Applicant's utility plant, all in the state of Missouri, totaled \$38,903,-538.70 with reserves of \$8,098,345.47 applicable thereto both as of June 30, 1954, per applicant's Exhibit No. 1. The original cost of utility plant of applicant was fixed as of December 31, 1945, by this commission in Case No. 10,852, and the books and records of applicant were adjusted accordingly. The evidence shows that additions and acquisitions subsequent to December 31, 1945, have been recorded at original cost; therefore, the plant figure as of June 30, 1954, may be considered as representing original cost of plant and the recorded reserves as of the same date may be considered to be appropriate.

Applicant's Exhibits Nos. 5 and 6 show that the average plant used in rendering gas service during the twelve months ended June 30, 1954, amounted to \$3,976,505 with average depreciation reserves of \$784,668 applicable thereto. The bases for the allocation to the gas utility of plant used by various utility departments of applicant were discussed with the staff of the commission prior to the preparation of applicant's exhibits in this cause. The staff considered the proposed methods of allocating commonly used plant to be reasonable and subsequent to the preparation of said exhibits verified the accuracy of their preparation.

The average reserve for amortization of limited term investments and the average contributions in aid of construction of gas plant during the

twelve months ended June 30, 1954, were respectively \$7,408 and \$59,810. Materials and supplies applicable to gas operations averaged by month-end balances for the period under review totaled \$110,361. The need for cash working capital was more than equaled by the average balance in accrued taxes. The average net plant rate base for the twelve months ended June 30, 1954, may be summarized as follows:

Gas Plant in Service .....	\$3,976,505.00
Depreciation Reserves .....	(784,668.00)
Amortization Reserve .....	( 7,408.00)
Contributions in Aid of Construction .....	( 59,810.00)
Materials and Supplies .....	110,361.00

Average Net Plant Rate Base \$3,234,980.00

( ) Denotes red figure

With respect to operating income, applicant's Exhibit No. 3 shows gas department operating income of \$222,-016 for the twelve months ended June 30, 1954. Adjustments to give full effect to changes occurring during the twelve months, to eliminate nonrecurring items and other adjustments considered to be appropriate, reduce the gas department operating income to \$197,682 on a pro forma basis. The bases upon which expenses common to various departments were allocated to the gas department were studied by the staff of the commission prior to the preparation of applicant's exhibits having to do with gas department operating income and the accuracy of the allocations was verified subsequent to the completion of said exhibits. Operating income of \$197,682 would yield an annual rate of return of 6.11 per cent on the net plant rate base of \$3,234,980.

## MISSOURI PUBLIC SERVICE COMMISSION

Applicant has calculated that the increased cost of gas to be purchased for resale to its customers will amount to \$298,461 per annum, basing this calculation on the gas purchased during the twelve months ended June 30, 1954. In order for applicant to pass on this additional cost of purchased gas to the consumers of same, it would be necessary that gross revenues be increased by approximately \$309,726 because of the franchise tax imposed by certain municipalities on gross revenues.

Applicant's proposed rates for other than industrial interruptible service, together with rates for that industrial interruptible service which became effective May 7, 1954, are designed to increase gross revenues by approximately \$308,786 per annum. Based on an additional gross revenue of \$308,786 per annum, which applicant desires to secure, we find that applicant can reasonably expect to realize operating income of approximately \$197,105 per annum from its gas operations, per applicant's Exhibits Nos. 3, 4, and 8, as amended at page 49 of the transcript in this case. Operating income of \$197,105 would yield applicant a rate of return of 6.09 per cent per annum on the \$3,234,980 net plant rate base, a slightly lower rate than that being realized prior to the filings in this cause. If applicant were to be required to absorb the additional cost of purchased gas, its rate of return on its gas property would be approximately 1.25 per cent per annum.

### *Conclusions*

[1, 2] Having considered the evidence in this cause, the commission is of the opinion and finds that applicant's request is reasonable and just and that the rates filed in this proceeding as applicant's Exhibit No. 10 should be permitted to become effective. Applicant's rate of return on its gas operations for the twelve months ended June 30, 1954, was not excessive and it herein seeks authority to pass on to its customers only the increased cost of gas and other expenses incident to the recovery of this increased cost of gas. If expenses other than purchased gas remain at their June 30, 1954, level, applicant can reasonably expect to realize a rate of return of approximately 6.09 per cent per annum from its gas department which in this case is considered by the commission to be adequate and not excessive. Since May 7, 1954, applicant has been realizing a portion of the gross revenue increase of \$308,786, herein to be authorized, by increased rates heretofore permitted to be charged certain of its industrial customers under authority granted in Case No. 12,829 [April 26, 1954]. Upon the final determination of rates filed by Cities Service Gas Company with the Federal Power Commission, refunds, if any, reverting to applicant shall be refunded by applicant to its customers in accordance with orders to be issued by this commission.

RE PIERCE BUS LINES, INC.

MASSACHUSETTS DEPARTMENT OF PUBLIC UTILITIES

Re Pierce Bus Lines, Inc.

D.P.U. 10838, D.P.U. 10865  
November 5, 1954

**A**PPLICATION by transit company for authority to increase rates; approved.

*Rates, § 124 — Operating rights as a factor — Transit company — Revocation of certificate — Injunction.*

A transit company should be authorized to increase its fares, notwithstanding that the company's certificate had been previously revoked by the department and a certificate covering the same route had been granted to a municipal transit authority where the company, since the revocation, has been operating under a valid injunction against the revocation and no final action has been taken by the court.

APPEARANCES: Fred W. Pierce, for Pierce Bus Lines, Inc.; A. P. Senopoulos, Assistant Corporation Counsel, for city of Boston.

By the DEPARTMENT: Pierce Bus Lines, Inc., is a common carrier of passengers for hire operating two unconnected routes, one in the Hyde Park district of Boston and the second between Walpole and Norwood. It has filed its MDPU No. 6 applicable to its Hyde Park run, increasing the basic fare from 5 cents to 10 cents, to be effective March 21, 1954, and its MDPU No. 7 applicable to the Walpole-Norwood run, principally increasing the basic first zone fare from 10 cents to 15 cents, to be effective April 19, 1954. Hearing on an investigation ordered by the department as to the propriety of the proposed increase in Hyde Park, after order suspending the same, was held on March 16, 1954. Hearing on the Walpole increase was held on April 14, 1954.

and the record of the prior hearing was incorporated into the record on such second hearing.

During the year 1953, respondent operated 122,307 bus miles over its regular routes and carried a total of 365,083 passengers. It reports total operating revenue for the year of \$34,-308 and operating expenses of \$36,-577, resulting in a net loss, after interest and taxes, of \$6,930. Its balance sheet as of the year end shows a current asset deficit of \$458 as against total current liabilities of \$10,-079. Of the accounts payable of \$9,504, \$6,134 is represented by accounts payable to officers. The balance of \$3,370 is payable to others, and presumably these obligations must be met by the company some time in the future. The company managed to pull through the year by dint of a donation to surplus of \$4,520. Its general office salary account in 1953 was only \$1,825, and, due to the ex-

## MASSACHUSETTS DEPARTMENT OF PUBLIC UTILITIES

treme age of its rolling stock, it accrued only \$1,093 during the year to depreciation reserves.

Respondent estimates that the proposed increase on the Hyde Park line will bring in \$6,500 in additional gross revenues and that on the Walpole line \$3,112. These estimates do not allow for any decrease in passenger traffic induced by the fare increase. Yet, it is clear that this factor cannot be ignored. Respondent has seen its gross receipts decline from \$40,081 in 1951 to \$32,857 in 1953, and no reason appears for assuming that this tendency is at an end. It estimates that its 1954 revenues at present rates would be \$31,485. We think it may very well be substantially less than that. So, also, for respondent to assume that these relatively substantial fare increases will not accelerate this tendency seems to us to be unwarrantably optimistic. If 1953 figures are used pro forma, this additional revenue would enable respondent to show a net profit of \$2,682 at an operating ratio of about 94 per cent. However, it is clear that it will not be able to hold its expenses to 1953 levels for very long, and we do not believe that the pro forma operating ratio indicated will turn out to be the actual. Respondent fully appreciates this, and has presented an estimate of 1954 results which shows an increase in operating expense of \$10,921, which is more than the increase in gross revenues contemplated to be produced by the proposed fare increases.

There is little doubt in our minds but that respondent must have the fare increases here sought in order to continue in business, if, indeed, it can do

it even then. There is no question at all about the matter so far as the Walpole run is concerned. The situation in Hyde Park, however, is peculiar.

In 1949, the Metropolitan Transit Authority petitioned the department for a certificate authorizing it to operate between Cleary Square and the Dedham-Boston line over the same route as is served by respondent. After hearing, the department found that the people of this area of Boston were entitled to service on the M. T. A., issued the certificate as requested, and revoked that of respondent. See *Re Pierce Bus Lines, D.P.U. 8407Q* [see D.P.U. 8407Q (1950) 83 PUR NS 146]. Respondent appealed from the revocation order, and obtained an injunction pendente lite. This matter has lain dormant in the equity files of the supreme judicial court ever since. We do not believe that this situation should continue any longer in view of the effect which the present order will have on the persons who use respondent's service, and we are so advising the attorney general. However, so long as respondent is operating under the protection of a valid injunction, we think we are required to treat it exactly as any other carrier in a rate proceeding, and that, upon adequate evidence such as is here before us, we are still required to permit it to increase its rates.

Accordingly, after investigation, public hearing and due deliberation, it is hereby

*Ordered:* That the rates and charges stated in MDPUs Nos. 6 and 7 filed by Pierce Bus Lines, Inc., on February 19, 1954, and March 19,

RE PIERCE BUS LINES, INC.

1954, respectively, be and the same hereby are approved, to be effective November 14, 1954; and it is *further* Ordered: That the investigation by the department in D.P.U. Nos. 10838 and 10865 be terminated and closed.

---

CALIFORNIA PUBLIC UTILITIES COMMISSION

Earl A. Renninger

v.

General Telephone Company of California

Decision No. 50821, Case No. 5568  
November 30, 1954

**C**OMPLAINT by former subscriber against telephone company's refusal to restore service; restoration ordered.

*Service, § 134 — Denial for unlawful use — Reasonable cause.*

1. A telephone company was found to have acted with reasonable cause in refusing to restore service to the residence of a subscriber whose facilities were disconnected by officers of the sheriff's office, where the company had received a letter from the sheriff requesting that the telephone facilities in question be discontinued because of unlawful use, p. 93.

*Service, § 134 — Unlawful use — Restoration of facilities.*

2. A telephone company was ordered to restore service to the residence of a subscriber after the facilities had been removed by action of officers of the sheriff's office, where it appeared that the unlawful use, upon which the sheriff's men had acted, consisted of a tenant conducting bookmaking operations over the telephone, which operations were in no way connected with or known to the subscriber, p. 93.

APPEARANCES: Earl A. Renninger, in propria persona; Marshall K. Taylor and Albert M. Hart, for defendant.

By the COMMISSION: [1, 2] The complaint alleges that Earl A. Renninger, of 14602 Grayland avenue, Norwalk, California, prior to August, 1951, was a subscriber and user of telephone service furnished by the General Telephone Company under

number Torrey 4-2137. On or about August 28, 1951, these telephone facilities were disconnected by officers of the sheriff's office of Los Angeles county, and that despite demands upon defendant to have the said telephone facilities restored the defendant has refused and does now refuse so to do. The complaint also alleges that the complainant has suffered and will suffer irreparable injury and great hard-

## CALIFORNIA PUBLIC UTILITIES COMMISSION

ship as a result of being deprived of these telephone facilities, and further that the complainant did not use and does not now intend to use the telephone facilities as an instrumentality to violate or to aid and abet the violation of the law.

Under date of September 7, 1954, the General Telephone Company filed an answer in which it alleged as an affirmative defense that it had received a letter dated August 28, 1951, from the sheriff of Los Angeles county, requesting that it disconnect the telephone facilities in question pursuant to a decision of this commission, Decision No. 41415, in Case No. 4930, dated April 6, 1948 (47 Cal PUC 853), and that pursuant to this request the defendant company discontinued the telephone service in question effective August 28, 1951.

A public hearing was held in Los Angeles before examiner Grant E. Syphers on October 14, 1954, at which time evidence was adduced and the matter submitted. At the hearing the complainant testified that in August, 1951, he was renting two rooms of his residence to a man named Herbert Arden Grosdidier. On one day during the month of August, when Mr. Renninger returned home from work at about 6 P.M., he found that the telephone had been taken, and subsequently learned that during the day officers of the sheriff's department had raided the house, arrested Mr. Grosdidier for bookmaking, and disconnected the telephone. The complainant further testified that he did not know of, and had no connection with, any bookmaking activities which the tenant may have engaged in.

In June, 1952, the complainant moved to Calexico, returning to Los Angeles in September, 1953. About June, 1954, his wife applied for a telephone, and resultantly a telephone instrument was placed in their home but was not put in operation. About two weeks later the telephone company removed the instrument, whereupon the instant complaint was filed. The complainant stated that he now needs a telephone in his residence, that he has not in the past used and does not now intend to use a telephone for any unlawful purpose. Further, he does not intend to rent any rooms of his house.

Exhibit No. 1 is a copy of a letter dated August 28, 1951, received by defendant company. The position of this company was that as a result of the receipt of this letter the company, in disconnecting and refusing to reconnect the service, acted with reasonable cause, as such term is defined in Decision No. 41415, *supra*.

In the light of this record we find that the action of the telephone company was based upon reasonable cause, as such term is used in Decision No. 41415, *supra*. We further find that there is no evidence to indicate that the complainant herein engaged in or was directly connected with bookmaking activities. Therefore, the complainant now is entitled to a restoration of telephone service.

### ORDER

The complaint of Earl A. Renninger against General Telephone Company having been filed, public hearing having been held thereon, the commission being fully advised in the premises and basing its decision upon

RENNINGER v. GENERAL TELEPH. CO. OF CAL.

the evidence of record and the findings herein,

It is *ordered* that the complainant's request for restoration of telephone service be granted, and that upon the filing by the complainant of an application for telephone service the General Telephone Company shall install

telephone service at complainant's residence at 14602 Grayland avenue, Norwalk, California, such installation being subject to all duly authorized rules and regulations of the telephone company and to the existing applicable law.

---

LOUISIANA PUBLIC SERVICE COMMISSION

South Central Railroad

v.

Arkansas & Louisiana Missouri Railway  
Company et al.

No. 6575, Order No. 6551  
August 13, 1954

PETITION by railroad for establishment of joint through rates  
and routes; granted.

Rates, § 454 — Railroads — Joint through rates.

A railroad was directed to establish joint through rates and routes with another railroad where shippers were presently paying higher prices based on combination of rates.

By the COMMISSION: Petitioner, South Central Railroad, is incorporated under the laws of Louisiana as a common carrier by railroad in intrastate commerce and has complied with all legal requisites in so far as its corporate organization is concerned.

Petitioner's complaint and petition was filed May 12, 1954, asking that the defendants be ordered to join with it in the establishment of joint through rates and routes, and the matter was

heard by the commission in regular session held at Shreveport, Louisiana, on June 19, 1954. The answers of the defendants to the petition were in the nature of general denials and they appeared at the hearing in opposition to the petition herein.

The South Central Railroad is a standard gauge railroad which connects with the Illinois Central Railroad at Shiloh, La., and extends one mile in an easterly direction to a point designated as Devejay, La. There is

## LOUISIANA PUBLIC SERVICE COMMISSION

a considerable quantity of sand and gravel moved from points on the South Central Railroad and there being no joint through rates at the present time the shippers are required to pay charges based on a combination of rates over Shiloh, La. These shippers are in direct competition with those at Harrison Junction, La., on the Louisiana Eastern Railroad Corporation, which railroad also connects with the Illinois Central Railroad at Shiloh, La., and in competition with shippers at Harley, La., on the Tangiaphoa & Eastern Railway which connects with the Illinois Central Railroad at Fluker, La., a point 9 miles north of Shiloh, La.

The Louisiana Eastern Railroad and the Tangiaphoa & Eastern Railway are parties to joint through rates with other rail lines and shippers located thereon at Harrison Junction and Harley, La., receive the benefit of the joint through rates, whereas, shippers on the South Central Railroad are required to pay the higher combination rates.

The facts in this case are very similar to previous cases in Dockets 3319

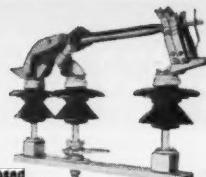
and 3354, reported in 20 Ann Rep La PSC 154, 161, for the year 1940 whereas it is stated that in the Tap Line Cases [(1913) 209 Fed 244, affirmed (1914) 234 US 1, 58 L ed 1185, 34 S Ct 741], the court said: "The right of the public to use the facilities of a railroad, and to demand service of it, rather than the extent of its business, is the real criterion by which to determine whether or not it is a common carrier."

We think these requirements are adequately met by the petitioner and it is our opinion that the petition should be granted. It is therefore,

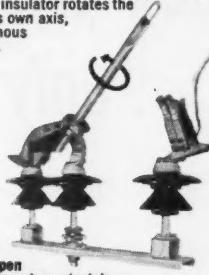
*Ordered*, that the South Central Railroad be and it is hereby recognized as and declared to be a common carrier by railroad intrastate in Louisiana, and the respondents hereby are commanded and directed to join with the said South Central Railroad in the publication of joint through rates and routes intrastate in Louisiana, and to do all the necessary things to accord to said South Central Railroad full recognition of its status as a common carrier by railroad intrastate within the state of Louisiana.



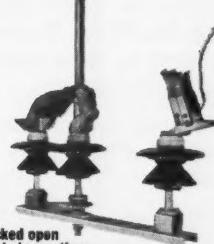
The blade of the MK-40 switch is actuated by a 45-degree bearing mechanism which replaces cranks, levers, links and cams. It converts motion of operating insulator to a vertical lifting and rotating motion of the blade, with smooth sequence and complete control at all times.



Switch closed  
Toggle effect of mechanism locks the blade in position. First 15° rotation of the insulator rotates the blade about its own axis, exerting enormous leverage force.



Switch partly open  
Ingenious engineering principle effects blade rotation, with the blade rise in degrees exceeding insulator rotation in degrees.



Switch locked open  
with the blade mechanism knuckle pin over dead center. Leverage force again breaks ice accumulation or corrosion easily.

## for smoother operation, longer service with **MK-40 Air Switches**

### Only DELTA-STAR MK-40 Switches offer all these additional advantages

- Visible high pressure silver inlaid hard drawn copper contacts at both ends of switch blade. Independent pressure applying non-ferrous leaf springs assure constant pressure. Heavily constructed with a minimum number of current interchange surfaces to withstand high short circuit currents.
- These switches have the same simple basic design in all rated sizes: 7.5 kv to 380 kv. 400 to 5000 amperes.
- Greaseless non-rusting rotating insulator bearings.
- Fully adjustable operating mechanism parts with pipe piercing set screws to eliminate slippage.

This close look at the MK-40 blade mechanism demonstrates another reason why this DELTA-STAR Air Switch is your standard of comparison.

The MK-40 is the result of a search for engineering simplicity and maximum efficiency. Only three moving parts are employed. No cranks, levers, links or cams are used. Factory sealed mechanism contributes to easiest possible maintenance and long life.

The blade mechanism develops enormous leverage in initial opening and final closing. Ice accumulation or corrosion at either end is easily broken. Variation in leverage equalizes the gravitational pull on the blade and results in smooth uniform operational effort.

This powerful, simplified blade mechanism is fundamental with all MK-40 Air Switches—from 400 to 5000 amperes and from 7.5 to 380 kv. It is another reason for preferring DELTA-STAR MK-40 Switches.

*When you want the best in high voltage switches specify the MK-40*

# DELTA-STAR ELECTRIC DIVISION



H. K. PORTER COMPANY, INC.

OF PITTSBURGH

2437 Fulton Street • Chicago 12, Illinois

District Offices in Principal Cities



# Here's Proof of Performance...

## 302 pressure-creosoted poles installed in 1928 ... only one replacement due to pole failure

CENTRAL HUDSON GAS & ELECTRIC CORPORATION, serving the Mid-Hudson Valley, with General Offices at Poughkeepsie, N. Y., has more than 100,000 pressure-creosoted poles in its system. The company began using pressure-creosoted yellow pine poles in 1926, one of the first lines to be built being the River Transmission Line from Highland to Newburgh, a distance of approximately 16 miles.

This line was installed in 1928 and 1929, using 302 40'-60' poles. To date, ten poles have been replaced, but only one due to wood failure. Boring tests made recently show the poles are still extremely sound.

In specifying poles, it will pay you to follow this utility's example and rely on Creosote's unmatched records of service. And when you do, be sure your poles are pressure-treated with uniform USS Creosote. Its deep penetration, retention and high toxicity assure you maximum pole life. For complete information, contact our nearest Coal Chemical sales office, or write directly to United States Steel Corporation, 525 William Penn Place, Pittsburgh 30, Pa.

See "THE UNITED STATES STEEL HOUR"—Televised alternate weeks—Consult your local newspaper for time and station.



1929 dating nails on this pole are evidence of the long, economical life of pressure-creosoted poles.



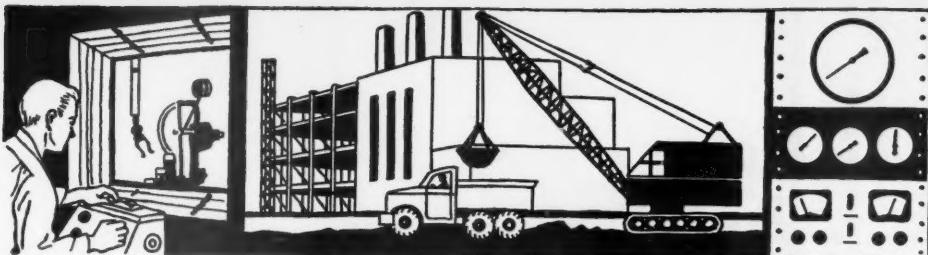
John J. Sotanski, Central Hudson Estimator, inspects pressure-creosoted poles in the company's River Line which have been in the ground more than a quarter century and are still sound, according to recent boring tests.

## USS CREOSOTE

SALES OFFICES IN PITTSBURGH, NEW YORK, CHICAGO, CLEVELAND, SAN FRANCISCO AND FAIRFIELD, ALA.

UNITED STATES STEEL





## Industrial Progress

### New York Telephone Plans Record Outlay of \$200,000,000

NEW York Telephone Company plans record outlays for expansion and improvements this year.

Keith S. McHugh, president, recently announced projects calling for expenditures of \$200,000,000, compared with \$182,000,000 in 1954. Previous high was \$194,000,000 in 1952.

### \$35,000,000 Program Proposed By Consol. Gas, Elec. Lt. of Bal.

**CONSOLIDATED** Gas, Electric Light & Power Company of Baltimore, announced a \$35,000,000 construction budget for 1955, topping all past years' construction programs and exceeding that of 1954 by more than \$7,000,000.

Charles P. Crane, president, said the expansion reflects increasing demand for gas and electric service, which he expects will continue to rise. In the last five years, he noted, the company has added 82,312 new electric customers and 48,463 gas customers. Included in those totals are 1954 additions of 74,726 electric and 9,747 gas customers.

### AGA Conference to Stress Management Development

MANAGEMENT development will be the theme of the first Spring Conference sponsored by the General Management Section of the American Gas Association, according to Larry Shomaker, vice president, Northern Natural Gas Company, section chairman. The conference will be held March 21-23 at the Hotel Netherland Plaza in Cincinnati.

General Sessions will be held each of the three mornings. The Committee on Arrangements under W. B. Tippy, Commonwealth Services Inc., has as-

sembled an imposing group of speakers from within and outside the industry. They will present subjects in the seven fields—accident prevention, purchasing and stores, rates, economics, corporate secretaries, competitive services, and insurance.

### Bell Tel. of Pa. to Set Construction Record

THE construction program of the Bell Telephone Company of Pennsylvania for 1955 will total \$89,897,000 and will be the largest in the company's history, exceeding the previous high of \$86,712,000 in 1954.

With the continued high levels of building creating new customers, a net gain of 135,000 telephones is expected in 1955, according to W. D. Gillen, president. The net gain in 1954 was 126,000. It is estimated that long distance traffic will rise above the 1954 level.

### \$76,000,000 Budgeted by So. Cal. Edison for Expansion

THE Southern California Edison Company has budgeted approximately \$76,000,000 for construction and plant expansion during 1955, according to Harold Quinton, president. Largest individual expenditures will be for new generating plants, transmission and distribution lines and substations.

With completion of the new facilities underway or begun in 1955 the company's generating capacity will be increased by more than 600,000 kilowatts by 1958. Edison's total generating capacity now is 2,191,420 kilowatts—an increase of nearly 80 percent since 1945.

The 1955 program includes work on the building of new steam-electric generating plants, additional hydroelectric powerhouses in the High Sierra and another major power reservoir there.

### Westinghouse Issues New Booklet On 2000-MC Microwave

A COMPLETE description of 2000-mc Microwave-radio systems for a variety of applications is given in a new 8-page booklet available from the Westinghouse Electric Corporation.

Features of Type-FR microwave radio and Type-FJ multiplexing equipment and their importance to the overall system is discussed. Points covered include frequency-division multiplexing, crystal frequency control, standby equipment, maintenance features, and many others.

For a copy of this booklet, B-6393, write Westinghouse Electric Corporation, Box 2099, Pittsburgh 30, Pa.

### Utah Pwr. & Lt. to Spend \$18,000,000 in 1955

UTAH Power & Light Company will spend \$18,000,000 on new construction in 1955 as a follow-up to its recently completed \$108,700,000 post-war expansion program.

Principal item in the new program will be completion of a third unit of the Gadsby steam-electric plant on the west side of Salt Lake City. Additional improvements also are planned for the new 66,000-kilowatt plant in Carbon County, which started operations late in November, 1954.

The third unit of the Gadsby plant is expected to be producing by June. Completion of this 100,000-kilowatt, \$16,000,000 unit will bring to 241,000 kilowatts the total system input from the Gadsby plant.

### \$98,000,000 Expansion Planned By Public Serv. Elec. & Gas

EXPENDITURES in 1955 for electric and gas additions and improvements by Public Service Electric and

(Continued on page 28)



## Southern COAL HELPS INDUSTRY

**keep power costs down  
as production goes up**

**Steam** cost records of Southern's customers prove this...

One reason of course, is Southern's exceptional ability to supply the right coal for any type of burning requirement. Fourteen big mid-western mines give you an outstanding selection. Equally essential operation-wise, is consistent uniformity of energy and burning characteristics—the controlled quality—of Southern's coals. This result of precision preparation assures continuously efficient boiler performance—economical coal utilization. These, plus an annual capacity of 10,000,000 tons, tremendous reserves, and a 50 year record of conscientious service are convincing reasons why Industry increasingly depends on Southern.

### SEND FOR THIS FREE BOOK

Written by Joseph Harrington of Southern's engineering staff—noted authority on Coal; its chemistry, preparation, and utilization storing and handling.

YOU CAN RELY ON SOUTHERN'S ENGINEERED INDUSTRIAL COALS



# Southern Coal Company, Inc.

GENERAL OFFICE: 333 NORTH MICHIGAN AVENUE • CHICAGO 1, ILLINOIS  
OFFICES IN: LOUISVILLE, MEMPHIS, NASHVILLE, ST. LOUIS  
SINCLAIR COAL COMPANY, KANSAS CITY 5, MO., WESTERN REPRESENTATIVE

### INDUSTRIAL PROGRESS (Continued)

Gas Company will reach an all-time one-year high of approximately \$98,000,000, Lyle McDonald, chairman of the board, announced recently. Gross expenditures for new construction in the last five years have amounted to approximately \$335,000,000.

This year's projects include completion of two major electric generating projects: The Burlington station to supply the Delaware Valley and another in Linden. When these units are in service, the electric generating system's capacity will be increased to 2,516,300 kilowatts.

Two new major switching stations will be started at South Camden Fairlawn and new substations will be located at Coytesville, Hoboken, East Paterson and Wayne Township.

To meet the anticipated added demands for gas, the gas manufacturing department will install gas compressors at the Harrison, West End, Trenton and Camden plants. These additions will necessitate the installation of larger piping connections at each of the plants.

Industrial and residential growth in certain areas of the state will make it necessary for the company to continue its program of large main installations.

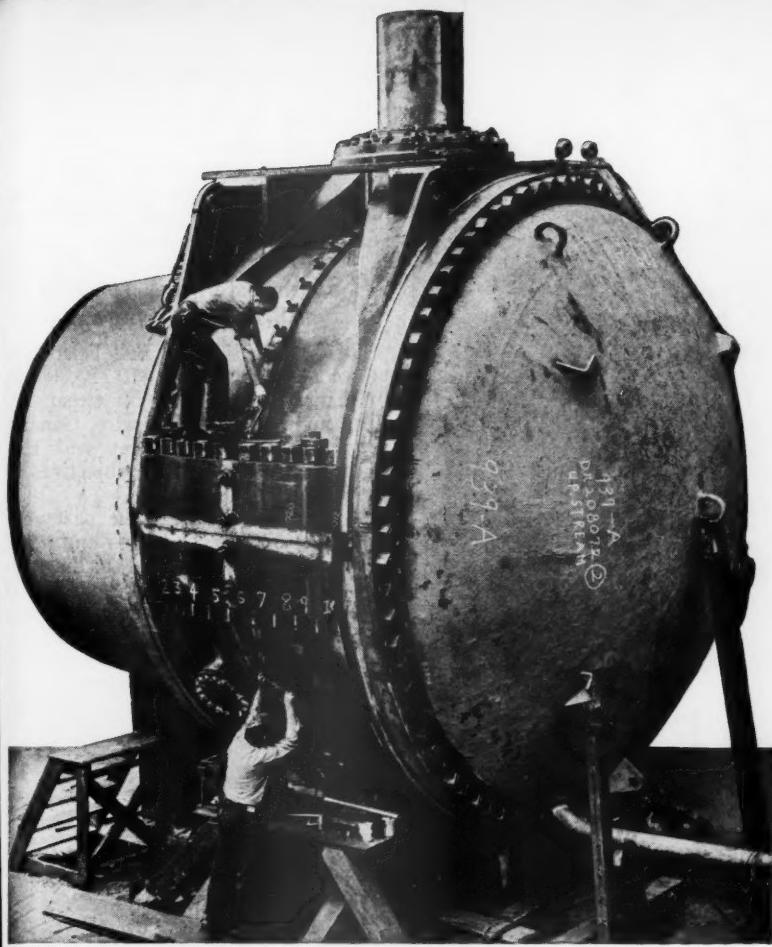
### Electrical Engineering Professorship Established by G-E at Columbia

THE establishment of a professorship in electrical engineering at Columbia University through a grant from the General Electric Company was announced recently by Dr. Grayson Kirk, president of the University. The professorship will be used for teaching and research in the fundamentals of generating, handling and processing energy.

In making the announcement, Dr. Kirk said that "this professorship creates another important link between Columbia and industry. It is an example of the growing support which industry is providing our institutions of higher education, and without which those institutions may be unable to progress. This professorship in electrical engineering also represents a true cooperative endeavor of education and industry to help provide men and research results in a field which will affect industry and the public alike. The University will have available to it the advice and counsel of the General Electric Company."

Dr. John R. Dunning, dean of the School of Engineering, commenting on the establishment of the professor-

(Continued on page 30)



This 16-Foot Butterfly Valve Illustrates the type of work which Newport News takes in stride. Newport News built 3 such valves, each weighing 446,000 lbs., for the Ross Power Plant, Skagit Project, Department of Light, City of Seattle, Washington. Designed for a water flow of 3,620 cu. ft. per sec., and a hydrostatic pressure of 290 psi, these valves were shop tested by Newport News at 450 psi. They are hydraulically operated with oil at 1,500 psi. pressure. Shop tests assure speedy, trouble-free assembly of Newport News built equipment, on the site.

## The TEST of a TITAN

Here is one of the largest high head butterfly valves ever built, undergoing a shop test at Newport News. If you had an opportunity to follow this unit from start to finish, you would see first hand how Newport News produces massive equipment economically. For economy is a basic advantage that results from Newport News' high integration of skill and production facilities.

Large engineering and technical staffs, operating a plant comprising acres of brass, iron and steel foundries, five huge machine shops and other extensive fabricating facilities, have made Newport News one of the world's largest producers of hydraulic turbines, valves, gates, penstocks and other essential equipment . . . both standard and special in design.

Let us bid on your equipment. Write us today for your copy of *Water Power Equipment*.

**NEWPORT  
NEWS**

**SHIPBUILDING AND  
DRY DOCK COMPANY**  
*Newport News, Virginia*



## Repair cost = $\frac{1}{50}$ ¢ per foot on 120,000 feet of extension work

**CENTRAL ELECTRIC & GAS CO.**, Lincoln, Neb. with their Cleveland "Baby Digger" consistently dig an average of about 200 feet of trench per hour . . . a good production average on gas extension projects where numerous line obstacles are encountered both above and below ground.

Their Cleveland, shown above working easily along the edge of a lawn, recently completed more than 600 hours of trench digging—about a half year's work on use of this kind—with no need of repairs or parts replacement due to wear, or maintenance of any kind except normal lubrication and fueling. (One shaft was broken by improper sprocket installation during the regular operator's vacation, at a cost of \$28.)

Write for Full Line CLEVELAND Bulletin or see your Local Distributor

**THE CLEVELAND TRENCHER COMPANY • 20100 St. Clair Ave., Cleveland 17, Ohio**



# CLEVELAND

## INDUSTRIAL PROGRESS (Continued)

ship, said that "study would be made, not only of the present status of knowledge in the electrical energy field, but also of applications of nuclear and solar energy. The principal objective of the professorship will be to develop courses, curricula and fundamental research."

### Southwestern Bell Tel. Has \$10,750,000 Program

SOUTHWESTERN Bell Telephone Company will spend \$10,750,000 in Arkansas during 1955 for expansion and improvement of service, General Manager Warren E. Bray said. Expenditures for the same objectives in 1954 totaled \$8,335,000.

Construction during the past year included 13 new buildings and additions to two others, as well as the placing of 1,000 new poles and 38,000 miles of wire. Long distance business increased 3.5 per cent during the latter part of 1954 as compared with 1953. The company installed nearly 8,600 new telephones in 1954, bringing the total to more than 230,000.

### G-E Issues Book on Street Lighting Cables

A NEW book on street lighting cables has been announced by General Electric's Wire and Cable Department. The information in this book is designed to help public utilities, municipalities, highway planning commissions, and engineering consultants select the type of cable best suited to a particular installation.

Both series and multiple street lighting circuits are discussed. Complete specification data is given on general types of cables for direct burial, and for use in conduit, duct or open-air as well as for cables for overhead lines to luminaires and from pole bases to luminaires. Splicing and terminating methods for cables with various types of insulation are also included.

The book, publication No. 19-294, is available without charge.

### Hyster Material Handling Report Available

HYSTER Company has issued a new Field Report, No. 56, showing how a large electric utility company uses 95 Hyster units to handle the tremendous tonnage of supplies and equipment necessary to maintain its widespread operations. Prepared in the field by Hyster engineers, the illustrated report is a case history of modern labor-saving handling and transporting.

(Continued on page 32)



Fast moving, too! . . . Cleveland "Baby Diggers" hustle safely from job to job . . . at legal speed limits . . . because they are so easily portable on fast loading Cleveland trailers.

# This mobile workshop cuts on-job cost!



**Service-Utility body lockers** are triple-sealed against dirt and moisture. Doors are fitted with recessed handles, slam-action catches, and keyed-alike cylindrical locks for full protection. Ladder racks, vise brackets, and pipe supports are also available, providing everything needed for every type of work.

**INTERNATIONAL Trucks**, with Service-Utility bodies, cut service call costs by bringing your workshop to the job. You make fewer trips, get more done per day.

The Service-Utility body provides all-steel lockers, with compartments of varying sizes, for orderly storage of all the tools, parts, and equipment needed to do a number of different jobs. Thus, there is no costly labor-time wasted in job-to-shop trips for needed or forgotten items.

And **INTERNATIONAL** Truck quality further lowers your operating costs. Famous **INTERNATIONAL** engines assure top performance with maximum economy. **INTERNATIONAL** Tough-Job

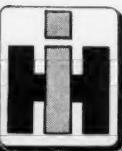
engineering and all-truck design mean utmost dependability, long life, and lowest maintenance expense.

**INTERNATIONAL** Trucks with Service-Utility bodies are available in 9 models, with 77-in. body lengths for 115-in. wheelbases, 84-in. lengths for 122-in. wheelbases, 89-in. lengths for 127-in. wheelbases and 96-in. lengths for 134-in. wheelbases. GVW ratings, 4,200 to 8,600 lbs.

Ask your **INTERNATIONAL** Dealer or Branch for complete details on these time-saving, money-saving workshop trucks. Time payments arranged.

**INTERNATIONAL HARVESTER COMPANY • CHICAGO**

International Harvester Builds MCCORMICK® Farm Equipment and FARMALL® Tractors...Motor Trucks...Industrial Power...Refrigerators and Freezers  
See the season's new TV hit, "The Halls of Ivy," with Ronald Colman and Benita Hume, CBS-TV, Tuesdays, 8:30 p.m. EST



## **INTERNATIONAL® TRUCKS**

"Standard of the Highway"

*This advertisement is neither an offer to sell nor a solicitation of offers to buy any of these securities.  
The offering is made only by the Prospectus.*

NEW ISSUE

January 19, 1955

## 100,000 Shares The Toledo Edison Company 4.25% Cumulative Preferred Stock (Par Value \$100 Per Share)

Price \$100 per share  
plus accrued dividends from December 1, 1954

*Copies of the Prospectus may be obtained from any of the several underwriters, including the undersigned, only in States in which such underwriters are qualified to act as dealers in securities and in which the Prospectus may legally be distributed.*

The First Boston Corporation

Collin, Norton & Co.

Blyth & Co., Inc. Merrill Lynch, Pierce, Fenner & Beane Smith, Barney & Co.

*This advertisement is neither an offer to sell nor a solicitation of offers to buy any of these securities.  
The offering is made only by the Prospectus.*

NEW ISSUE

January 19, 1955

## 400,000 Shares The Toledo Edison Company Common Stock (Par Value \$5 Per Share)

Price \$14.25 per share

*Copies of the Prospectus may be obtained from any of the several underwriters, including the undersigned, only in States in which such underwriters are qualified to act as dealers in securities and in which the Prospectus may legally be distributed.*

The First Boston Corporation

Collin, Norton & Co.

Blyth & Co., Inc. Merrill Lynch, Pierce, Fenner & Beane Smith, Barney & Co.

### INDUSTRIAL PROGRESS (Continued)

methods in conjunction with a variety of Hyster industrial truck models. Copies are available from the nearest dealer or from the Hyster Company, P. O. Box 4318, Portland 8, Oregon.

#### McCabe-Powers Adds to Line Of Aerial Equipment

McCABE-POWERS Auto Body Company has announced an addition to its Powers-American line of truck-mounted aerial equipment.

The new unit, known as the "Sky-Master" Hydraulic Aerial Beam, consists of a revolving mast and a pair of hydraulically-actuated beams, constructed to carry two men up, out, over, or down to an unlimited number of positions within the operating range.

The following special features of the "Sky-Master" are noted: Supporting mast, which rotates on roller bearings, can be revolved continuously in either direction; Inner beam can be moved to any point in an 85 degree arc; Outer beam, moved hydraulically in combination with drive pulleys and  $\frac{1}{4}$  inch wire rope, can be spotted in any position within an operating arc of approximately 265 degrees; Work baskets can be moved around obstacles to reach any working position in the range of movement. It can be furnished in two sizes, installed on a Powers-American Body or on a unit designed to fit individual requirements.

Construction, operation, and safety features are described in Powers-American Bulletin No. 410. A copy, with price information, may be obtained from McCabe-Powers Auto Body Company, 5900 North Broadway, St. Louis 15, Missouri.

#### Sangamo Enters Power Capacitor Field

THE Sangamo Electric Company announces its entry into the power capacitor field with the introduction of Sangamo Diaclor Power Capacitors, available initially in two standard ratings: 2400 volts, 25 kvar, and 7200 volts, 25 kvar.

These capacitors are supplied in all-welded, heavy gauge cases of either stainless steel or aluminum-metallized mild steel. According to the announcement, a unique, five-step corrosion-resistant treatment gives the mild steel case enduring protection against corrosion and abrasion.

Diaclor, a non-inflammable stabilized liquid dielectric, enables operation in ambient temperatures ranging from minus 40° C to plus 46° C. The

(Continued on page 34)

## **Important Announcement . . .**

Effective with the January 7, 1955 issue of the

## **P.U.R. Executive Information Service**

Weekly Letter on Utilities No. 1097—a separate and distinct feature was added in the form of a special supplement devoted to . . .

### **Atomic Energy Commission (AEC) Developments**

in the field of *regulation and allied topics.*

*This supplement is the first of a series of special bulletins that will be issued periodically with these Weekly Letters.*

Send in your subscription today for the P.U.R. Executive Information Service (Weekly Letter on Utilities) at \$12.50 per quarter, and receive the initial AEC Developments File and subsequent AEC bulletins as issued . . . **FREE!**

### **P.U.R. EXECUTIVE INFORMATION SERVICE**

**309 MUNSEY BUILDING**

**WASHINGTON 4, D. C.**

### **P.U.R. QUESTION SHEETS**

*an educational opportunity*

With the least possible expenditure of time, effort and money, *utility executives, lawyers, accountants, engineers and others* interested in any *phase of public utility regulation* can keep well informed through these *brief, four-page leaflets* issued every two weeks.

They consist of 10 questions and 10 authoritative answers based on current decisions revealing court and commission views pro and con. Annual subscription \$10.

*Send your order to*

**Public Utilities Reports, Inc.,**

**Munsey Building, Washington 4, D. C.**

## INDUSTRIAL PROGRESS—(Continued)

Diaclor completely fills the case and bushings. An internal reservoir maintains full insulation to case when the unit is end-mounted, even in the coldest weather.

Sangamo has built a thoroughly modern plant exclusively for the manufacture of these power capacitors. It is humidity controlled, completely air-conditioned and contains the latest equipment for fabricating, processing and testing.

Full information on these Power Capacitors may be obtained by writing for Bulletin 1120. Address Sangamo Electric Company, Springfield, Illinois.

### Philadelphia Elec. Forms Economic Analysis Div.

PHILADELPHIA Electric Company has established a new department—the Economic Analysis division, to be headed by Constantine W. Bary.

The division will conduct research and develop studies and analyses on the economics of rendering electric, gas, and steam service. The cost and pricing of all classes of service will be analyzed by the division.

### Georgia Power Plans \$11,000,000 Plant

PLANS to construct a 48,000-kilowatt hydroelectric plant and dam on the Chattahoochee river at Columbus, at a site known as Clapp's Factory, at an estimated cost of more than \$11,000,000, were announced recently by Harilee Branch, Jr., president of the Georgia Power Company.

Preliminary plans call for the construction of a power house containing three hydroelectric generators of 16,000 kilowatts each. Under average rainfall conditions the plant will produce 243,000,000 kilowatt hours a year.

According to the company's plans, the dam will be of concrete construction, 75 feet at its maximum height and 1,848 feet long. It will create a lake eight and a half miles long, backing water up to the foot of the Goat Rock dam. The lake will cover 2,480 acres at maximum elevation and will have a shore line of 40 miles. It will be available to citizens of Columbus and the surrounding area for sailing, fishing, swimming and other recreational activities. The company also plans to lease building sites for the construction of cottages.

The Clapp's Factory reservoir will resemble some of the company's other

hydroelectric projects, especially Lakes Rabun and Sinclair, which have become popular resort and recreational centers. The lake will vary from a half-mile to a mile-and-a-half in width.

### C. T. Sinclair Named Vice President Of Peter F. Loftus Corp.

The Peter F. Loftus Corporation announced the election of Carroll T. Sinclair as vice president, effective February 1, 1955. Mr. Sinclair was formerly vice president, engineering and construction of the Duquesne Light Company. Prior to his coming to Pittsburgh, he was associated with the Consolidated Edison Company of New York.

In his association with the Peter F. Loftus Corporation, Mr. Sinclair will direct the design and consulting engineering activities of the utility division of the corporation.

### General Tel. of Cal. Has \$100,000,000 Program

Outlining a \$100,000,000 expansion and service improvement program for General Telephone Company of California for the next 3 years, Edwin M. Blakeslee, company president, announced plans for bringing additional and improved telephone service to the territory served by the firm.

This 36 months' schedule calls for expenditures of \$37,787,800 in 1955; \$33,000,000 in 1956; and more than \$32,000,000 in 1957. "We are furnishing telephone service in many of the fastest growing areas in Southern California" Mr. Blakeslee said, "and our 3-year plan has been carefully designed to allow for long range expansion and immediately care for several critical sections where unprecedented population expansion has caused us to build up a backlog of orders."

Among the most significant achievements in 1955 will be the establishment of a new million dollar dial system in Lancaster scheduled for December. This improvement also includes a long distance toll center, business office and supply and maintenance facility. Mr. Blakeslee pointed out that his company is better than 98 per cent dial operated which is well above the national average. Plans have been made to change Santa Paula and Reedley to dial which will make the system fully automatic by 1958.

The company estimates it will add

50,000 new telephones next year after having established a new 25-year record in 1954 by gaining 61,132.

The company provides service in seven counties with more than 634,000 telephones extending north to San Joaquin Valley, south to Laguna Beach, east of San Bernardino and including most of the coastal area from Laguna Beach to Santa Maria. It serves about 25 per cent of the population of Los Angeles County. Since the beginning of 1948, it has more than trebled its telephone plant which now is in excess of \$191,000,000.

### AGE System Continues Huge Expansion Program

The huge system expansion program of the American Gas and Electric Company will continue unabated through 1955 and 1956, according to a recent announcement.

President Philip Sporn announced recently that the AGE System has budgeted \$80,300,000 for expansion of its electric power production and delivery facilities during 1955. And, for 1956, the expenditure will be even higher, \$99,600,000.

The \$80,300,000 earmarked for this year's construction work includes: \$17,500,000 for generation facilities, \$26,500,000 for transmission lines and stations, and \$29,800,000 for distribution lines and stations. The figure for 1955 is only slightly less than the 1954 construction expenditure of \$85,000,000.

In the 10-year period 1947-56, inclusive, the AGE System will have invested approximately \$865,000,000 in its expansion program, including 2,815,000 kilowatts of new electric generating capability.

Mr. Sporn stated that the AGE System will add another 570,000 kw in the next two years in order to meet the load increase that is expected in the company's seven-state territory by 1957. This will raise the System's total capability to 4,555,000 kw, more than double what it was in 1949.

### UTILITY RATE ANALYST II

Salary: \$7777 to \$9770 a year

Opportunity with Philadelphia's Water Department. Performs professional research in assembling and analyzing statistical data related to cost of and equitable charges for furnishing water and sewer service. Requirements include college degree plus four years experience in development or analysis of rate structures for revenue characteristics in a public utility. One year of this experience should have been in a supervisory capacity. For further information contact Personnel Department, Room 127, City Hall, Philadelphia 7, Pennsylvania, before February 21, 1955.

# PROFESSIONAL DIRECTORY

• This Directory is reserved for engineers, accountants, rate experts, consultants, and others equipped to serve utilities in all matters relating to rate questions, appraisals, valuations, special reports, investigations, financing, design, and construction. > >

## THE AMERICAN APPRAISAL COMPANY

ORIGINAL COST STUDIES • VALUATIONS • REPORTS

for

ACCOUNTING AND REGULATORY REQUIREMENTS

NEW YORK WASHINGTON CHICAGO MILWAUKEE SAN FRANCISCO  
and other principal cities

## BLACK & VEATCH

CONSULTING ENGINEERS

Electricity, Natural Gas and Water Utilities  
Production, Transmission, Distribution

Reports, Design, Supervision of Construction  
Investigations, Valuation and Rates

4706 BROADWAY, KANSAS CITY 2, MISSOURI (SINCE 1915)

## BODDY, BENJAMIN AND WOODHOUSE, INC.

CONSULTING ENGINEERS

JAMES W. PARKER, SENIOR CONSULTANT

Power Plant Design, Specification, and Construction Supervision  
Economic and Thermodynamic Studies, Technical Services and Reports

28 WEST ADAMS AVENUE

DETROIT 26, MICHIGAN

## DAY & ZIMMERMANN, INC.

ENGINEERS

NEW YORK

PHILADELPHIA

CHICAGO

DESIGN, CONSTRUCTION, INVESTIGATIONS, REPORTS, APPRAISALS AND MANAGEMENT



★ Standby  
★ Augmentation  
★ 100% Town Supply  
Design • Engineering • Construction

DRAKE & TOWNSEND

INCORPORATED

11 WEST 42ND STREET NEW YORK 36, N.Y.



## THE FLUOR CORPORATION, LTD.

Engineers • Constructors • Manufacturers

LOS ANGELES 22, CALIFORNIA

Builders of steam generating and hydro-electric power plants

New York • Chicago • Houston • San Francisco • Tulsa • Philadelphia • Toronto • Calgary • Denver

Associated with SINGMASTER & BREYER, INC., New York City, N.Y.

H. G. ACRES COMPANY, LTD., Niagara Falls, Ontario

(Professional Directory Continued on Next Page)

PROFESSIONAL DIRECTORY (continued)



**Ford, Bacon & Davis**  
VALUATION REPORTS CONSTRUCTION RATE CASES  
**Engineers**  
NEW YORK • CHICAGO • LOS ANGELES

**GIBBS & HILL INC.**

CONSULTING ENGINEERS  
DESIGNERS - CONSTRUCTORS  
NEW YORK - LOS ANGELES  
INDIANAPOLIS - SAN ANTONIO



**GILBERT ASSOCIATES, INC.**  
ENGINEERS • CONSULTANTS • CONSTRUCTORS  
607 WASHINGTON ST.  
READING, PA.

• WASHINGTON • PHILADELPHIA • NEW YORK

**W. C. GILMAN & COMPANY**

CONSULTING ENGINEERS  
ELECTRIC — GAS — TRANSIT — WATER  
Financial and Economic Reports  
Valuations—Rate of Return—Depreciation Studies  
Traffic Surveys—Fare Analyses  
55 Liberty Street New York 5, N. Y.

**JAY SAMUEL HARTT**

CONSULTING ENGINEER  
327 South LaSalle Street • CHICAGO • Telephone HArrison 7-8893  
Consultant to Public Utilities: Valuations; Rate of Return Studies; Reports for  
Financing; Other Problems of Management, Engineering and Finance.

**CYRUS G. HILL, ENGINEERS**

Public Utility Properties  
Valuation and Operating Reports  
Plans — Design — Construction — Rate Cases  
134 So. LaSalle Street Chicago 3, Illinois

**GUSTAV HIRSCH ORGANIZATION, INC.**

1347 West 5th Ave., Columbus (12) Ohio  
Telephone Hudson 8-0611

*Consulting and Supervisory Engineers and Contractors  
Construction and Operation of Utility Enterprises*

*Mention the FORTNIGHTLY—It identifies your inquiry*

## PROFESSIONAL DIRECTORY (continued)

### HOOSIER ENGINEERING COMPANY

*Erectors of Transmission Lines*

1384 HOLLY AVENUE

COLUMBUS, OHIO

### JENSEN, BOWEN & FARRELL

ENGINEERS

ANN ARBOR, MICHIGAN

APPRAISALS—INVESTIGATIONS—DEPRECIATION STUDIES—  
COST TRENDS — REPORTS  
*for Rate Cases, Security Issues, Regulatory and Accounting Requirements*  
ORIGINAL COST AND CONTINUING PROPERTY RECORD  
DETERMINATION



*The Kuljian Corporation*

ENGINEERS . CONSTRUCTORS

**POWER PLANT SPECIALISTS**

DESIGN • CONSTRUCTION • MANAGEMENT  
SURVEYS • INVESTIGATIONS • REPORTS

1200 N. BROAD ST., PHILADELPHIA 21, PA.

### William S. Leffler, Engineers Associated

NOROTON, CONNECTICUT

*Utility Management Consultants Specializing in*

### **COST ANALYSIS**

*for past 35 years*

GAS  
ELECTRIC  
WATER

REGULATORY  
AND  
MUNICIPAL  
PROBLEMS

Send for brochure: "The Value of Cost Analysis to Management"

### N. A. LOUGEES & COMPANY

*Engineers and Consultants*

REPORTS—APPRAISALS—DEPRECIATION STUDIES  
RATE CASES—BUSINESS AND ECONOMIC STUDIES

120 Broadway

New York

### CHAS. T. MAIN, INC.

*Power Surveys—Investigations—Valuations—Reports*

*Steam, Hydro Electric and Diesel Plants*

*Gas Turbine Installations*

80 FEDERAL STREET

---

BOSTON 10, MASS.

### MIDDLE WEST SERVICE COMPANY

*Business and Engineering Consultants*

(INCLUDING JAY SAMUEL HARTT CONSULTING ENGINEERS)

Organization • Corporate Practices • Accounting • Budgeting • Financing • Taxes • Stock Transfer • Appraisals • Valuations • Economic Analysis • Cost of Money Studies • Depreciation Studies • Engineering • System Planning • Industrial Engineering • New Business • Rates • Pricing Sales and Marketing • Safety • Insurance • Pensions • Employee Welfare • Public Relations • Advertising • Personnel • Industrial Relations

20 NORTH WACKER DRIVE • CHICAGO 6, ILLINOIS

## PROFESSIONAL DIRECTORY (continued)

### **Pioneer Service & Engineering Co.**

CONSULTING, DESIGNING AND  
OPERATING ENGINEERS  
PURCHASING

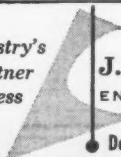
231 SOUTH LA SALLE STREET



SPECIALISTS IN  
ACCOUNTING, FINANCING, RATES,  
INSURANCE AND DEPRECIATION

CHICAGO 4, ILLINOIS

*Industry's  
Partner  
for Progress*



**J.F. Pritchard & Co.**  
ENGINEERS • CONSTRUCTORS

Dept. 415, 210 W. 10th St., Kansas City 5, Mo.

Complete Services for Gas  
and Electric Utilities • Designing  
• Engineering • Construction  
• Alterations • Expansions  
• Modernization • Surveys • Plans  
• Piping • Equipment • Steam  
or Diesel Power Plants



### **THE RUST ENGINEERING CO.**

PITTSBURGH 19, PA. • BIRMINGHAM 3, ALA.

Offices in Principle U.S. and Canadian Cities

**Power Plant Design and Construction**

Boiler Settings • Chimneys • Equipment Erection

Also sliding form work, refractory brick-work and insulation, soil compaction, other specialties.

**SANDERSON & PORTER**  
ENGINEERS  
AND  
CONSTRUCTORS

**S & P**

### **Sargent & Lundy**

ENGINEERS

Steam and Electric Plants

Utilities—Industrials

Studies—Reports—Design—Supervision

Chicago 3, Ill.

### **The J. G. WHITE ENGINEERING CORPORATION**

*Design—Construction—Reports—Appraisals  
Consulting Engineering*

80 BROAD STREET

NEW YORK 4, N. Y.

### **Whitman, Requardt and Associates**

**DESIGN — SUPERVISION  
REPORTS — VALUATIONS**

1304 ST. PAUL STREET

Publishers of the 35-year-old  
**HANDY-WHITMAN INDEX**  
for Public Utility  
Construction Cost Trends  
Including Hydro-Electric Properties

BALTIMORE 2, MARYLAND

*Mention the FORTNIGHTLY—It identifies your inquiry*

## PROFESSIONAL DIRECTORY (concluded)

**Abrams Aerial Survey Corporation**  
 PHOTOGRAMMETRIC ENGINEERS FOR MORE THAN A  
 THIRD OF A CENTURY  
*Aerial Photography — Atlas Sheets — Mosaics —  
 Plan and Topographic Maps — Profiles — Infra-red  
 Photography — Photo-interpretation Instruments*  
 614 E. Shiawassee St. Lansing, Michigan

**LUCAS & LUICK**  
**ENGINEERS**

DESIGN, CONSTRUCTION SUPERVISION,  
 OPERATION, MANAGEMENT, APPRAISALS,  
 INVESTIGATIONS, REPORTS, RATES

231 S. LASALLE ST., CHICAGO

**EARL L. CARTER**  
*Consulting Engineer*  
 REGISTERED IN INDIANA, NEW YORK, OHIO,  
 PENNSYLVANIA, WEST VIRGINIA, KENTUCKY  
*Public Utility Valuations, Reports and  
 Original Cost Studies*  
 910 Electric Building Indianapolis, Ind.

**LUTZ & MAY**  
*Consulting Engineers*

STEAM, GAS & DIESEL POWER STATIONS  
 PUMPING PLANTS—ELECTRIC SYSTEMS  
 REPORTS—DESIGN—APPRaisalS  
 1009 Baltimore Kansas City 6, Mo.

ENGINEERS, CONSTRUCTION AND  
 MAINTENANCE CONTRACTORS  
 for the GAS INDUSTRY  
  
**CONSOLIDATED  
 GAS AND SERVICE CO.**  
 327 So. LaSalle St., Chicago 4, Ill.

**MINER AND MINER**  
**CONSULTING ENGINEERS**

INCORPORATED

GREELEY COLORADO

**GANNETT FLEMING CORDDRY AND CARPENTER, INC.**  
*ENGINEERS*  
 HARRISBURG, PENNSYLVANIA  
*Investigations—Reports—Appraisals  
 Original Cost and Depreciation Studies  
 Rate Analyses—Insurance Surveys*

**A. S. SCHULMAN ELECTRIC CO.**  
*Electrical Contracting Engineers*  
 TRANSMISSION LINES—DISTRIBUTION—POWER  
 STATION—INDUSTRIAL—COMMERCIAL  
 INSTALLATIONS  
 CHICAGO LOS ANGELES

**FRANCIS S. HABERLY**  
 CONSULTING ENGINEER  
*Valuation — Depreciation  
 Investigations and Reports*  
 122 SOUTH MICHIGAN AVENUE, CHICAGO

**SLOAN, COOK & LOWE**  
**CONSULTING ENGINEERS**  
 120 SOUTH LA SALLE STREET  
 CHICAGO  
*Appraisals — Reports  
 Operating — Financial — Plant*

**JACKSON & MORELAND**  
*Engineers and Consultants*  
 Design and Supervision of Construction  
 Reports — Examinations — Appraisals  
 Machine Design — Technical Publications  
 BOSTON NEW YORK

Representation in this Professional Directory  
 may be obtained at very reasonable rates.  
 Kindly address inquiries to:

ADVERTISING DEPARTMENT  
 Public Utilities Fortnightly  
 309 Munsey Building  
 Washington 4, D. C.

*Mention the FORTNIGHTLY—It identifies your inquiry*

# INDEX TO ADVERTISERS

[The Fortnightly lists below the advertisers in this issue for ready reference. Their products and services cover a wide range of utility needs.]

<b>A</b>	<b>J</b>
Abrams Aerial Survey Corporation .....	39
*Allen & Company .....	39
*Allis-Chalmers Manufacturing Company .....	35
American Appraisal Company, The .....	35
American Telephone & Telegraph Company .....	13
*Analysts Journal, The .....	
<b>B</b>	<b>K</b>
Babcock & Wilcox Company, The .....	4-5
Black & Veatch, Consulting Engineers .....	35
*Blaw-Knox Company .....	
*Blyth & Company, Inc. ....	35
Boddy, Benjamin and Woodhouse, Inc. ....	
<b>C</b>	<b>L</b>
Carter, Earl L., Consulting Engineer .....	39
Cleveland Trencher Co., The .....	30
Columbia Gas System, Inc. ....	Inside Back Cover
Commonwealth Associates, Inc. ....	15
Commonwealth Services, Inc. ....	15
Consolidated Gas and Service Co. ....	39
<b>D</b>	<b>M</b>
Day & Zimmermann, Inc., Engineers .....	35
Delta-Star Electric Division, H. K. Porter Co., Inc. ....	25
Dodge Division of Chrysler Corp. ....	20
Drake & Townsend, Inc. ....	35
<b>E</b>	<b>N</b>
Ebasco Services, Incorporated .....	23
*Electro-Motive Division, General Motors .....	
<b>F</b>	<b>P</b>
First Boston Corporation, The .....	32
Fluor Corporation, Ltd., The .....	35
Ford, Bacon & Davis, Inc., Engineers .....	36
*Foster Wheeler Corporation .....	
*Friez Instrument Div. of Bendix Aviation Corp. ....	
<b>G</b>	<b>R</b>
Gannett Fleming Corddry and Carpenter, Inc. ....	39
General Electric Company ....	Outside Back Cover, 7
Gibbs & Hill, Inc., Consulting Engineers .....	36
Gilbert Associates, Inc., Engineers .....	36
Gilman, W. C., & Company, Engineers .....	36
*Glore, Forgan & Co. ....	
*Guaranty Trust Company of New York .....	
<b>H</b>	<b>S</b>
Haberly, Francis S., Consulting Engineer .....	39
*Halsey, Stuart & Company, Inc. ....	
*Harriman Ripley & Co. ....	
Hartt, Jay Samuel, Consulting Engineer .....	36
Hill, Cyrus G., Engineers .....	36
*Hill, Hubbell and Company .....	
Hirsch, Gustav, Organization, Inc. ....	36
Hoosier Engineering Company .....	37
<b>I</b>	<b>U</b>
*International Business Machines Corporation .....	
International Harvester Company, Inc. ....	31
Irving Trust Company .....	11
Professional Directory .....	
.....35-39	
<b>J</b>	
Jackson & Moreland, Engineers .....	39
Jensen, Bowen & Farrell, Engineers .....	37
<b>K</b>	
*Kellogg, M. W., Company, The .....	
*Kidder, Peabody & Co. ....	
*Kuhn, Loeb & Co. ....	
Kuljian Corporation, The .....	37
<b>L</b>	
*Langley, W. C., & Co. ....	
Leffler, William S., Engineers Associated .....	37
*Lehman Brothers .....	
*Loeb (Carl M.), Rhoades & Co. ....	
Lougee, N. A., & Company, Engineers .....	37
Lucas & Luick, Engineers .....	39
Lutz & May, Consulting Engineers .....	39
<b>M</b>	
Main, Chas. T., Inc., Engineers .....	37
Martin Publications .....	22
McCabe-Powers Auto Body Company .....	16-17
*Merrill Lynch, Pierce, Fenner & Beane .....	
Middle West Service Co. ....	37
Miner and Miner .....	39
Moloney Electric Company .....	24
*Morgan Stanley & Company .....	
Motorola Communications & Electronics, Inc. ....	21
<b>N</b>	
Newport News Shipbuilding & Dry Dock Company .....	29
<b>P</b>	
Pioneer Service & Engineering Company .....	18, 38
Pritchard, J. F., & Co. ....	38
<b>R</b>	
*Recording & Statistical Corporation .....	
Remington Rand Inc. ....	9
Robertson, H. H., Company .....	19
Rust Engineering Company, The .....	38
<b>S</b>	
Sanderson & Porter, Engineers .....	38
Sargent & Lundy, Engineers .....	38
Schulman, A. S., Electric Co., Engineers .....	39
Sloan, Cook & Lowe, Consulting Engineers .....	39
*Smith, Barney & Co. ....	
Southern Coal Company, Inc. ....	28
Sprague Meter Company, The .....	Inside Front Cover
<b>U</b>	
*Union Securities Corporation .....	
United States Steel Corporation .....	26
<b>W</b>	
*Western Precipitation Corporation .....	
White, J. G., Engineering Corporation, The .....	38
Whitman, Requardt and Associates .....	38

\*Fortnightly advertisers not in this issue.



© The Columbia Gas System

**CHARLESTON GROUP:** United Fuel Gas Company, Atlantic Seaboard Corporation, Amere Gas Utilities Company, Virginia Gas Distribution Corporation, Big Marsh Oil Company, Central Kentucky Natural Gas Company; **COLUMBUS GROUP:** The Ohio Fuel Gas Company; **PITTSBURGH GROUP:** The Manufacturers Light and Heat Company, Binghamton Gas Works, Cumberland and Allegheny Gas Company, Home Gas Company, The Keystone Gas Company, Inc., Natural Gas Company of West Virginia; **OIL GROUP:** The Preston Oil Company.



**GENERAL ELECTRIC ANNOUNCES . . .**

# *New* <sup>FORM</sup> **400 Luminaires**

General Electric's new Form 400 luminaire represents a major advancement in mercury street lighting. Its attractive, functional design makes the luminaire flexible and easy to service.

**BETTER OVER-ALL VISIBILITY** results from a unique optical design. Distribution patterns I.E.S. Types II and III are available, assuring high utilization and uniform pavement brightness regardless of street width.

**EASY TO SERVICE**, the Form 400 luminaire reduces maintenance costs. Hinged glassware speeds up main-

tenance, and no tools are required to detach either the reflector or glassware from the unit.

**GREATER FLEXIBILITY** is obtained with a choice of five different mercury lamps. In addition, the Form 400 can operate on conventional circuits with ballasts, or in series on the new Ballastless Mercury circuit.

**MORE INFORMATION** on this outstanding new development in mercury street lighting is available from your nearest G-E Apparatus Sales Office, or Authorized Agent, or by writing Section 452-155, Outdoor Lighting Dept., General Electric Co., West Lynn 3, Mass.

*Progress Is Our Most Important Product*

**GENERAL**  **ELECTRIC**

